Regional Urban Systems in the Roman World, 150 BCE – 250 CE

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Regional Urban Systems in the Roman World, 150 BCE – 250 CE

Edited by

Luuk de Ligt
John Bintliff

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Abbreviations

AE	*L'Année Épigraphique*
AErgMak	*Το Αρχαιολογικό Έργο στη Μακεδονία και στη Θράκη*. Thessaloniki: Hellenic Ministry of Culture-University of Thessaloniki.
AIJ	*Antike Inschriften aus Jugoslawien*
Albania, 1945	*Albania*, The Naval Intelligence Division, Geographical Handbook Series. London 1945.
Barrington Atlas	Talbert, R.J.A. (ed.), *Barrington Atlas of the Greek and Roman World*. Princeton 2000.
CIL	*Corpus Inscriptionum Latinarum*
CPCI	Hansen, M.H. and Th.H. Nielsen. *An Inventory of Archaic and Classical Poleis*. Oxford 2004.
DNP	*Der Neue Pauly*
I. Didyma	Wiegand, T. and A. Rehm, *Didyma II: Die Inschriften*. Berlin 1958.
I. Ephesos	*Die Inschriften von Ephesos*. Bonn 1979–1984.
IG	*Inscriptiones Graecae*
IGR	*Inscriptiones Graecae ad res Romanas pertinentes*. Paris 1911–1927.
ILAfr	*Inscriptions latines d'Afrique*
ILJug	*Inscriptiones Latinae quae in Iugoslavia repertae et editae sunt*
ILTun	*Inscriptions latines de la Tunisie*
IMS	*Inscriptiones Moesiae Inferioris*
MAMA	*Monumenta Asiae Minoris Antiquae*
PECS	Stillwell, R., W.L. MacDonald and M.H. McAlister, *Princeton Encyclopedia of Classical Sites*. Princeton 1976.
RDGE	R. Sherk, *Roman Documents from the Greek East*. Baltimore 1969.
RIC	*Roman Imperial Coinage*
RIU	*Die römischen Inschriften Ungarns*
RPC I	Burnett, A., M. Amandry and P.P. Ripollès, *Roman Provincial Coinage I.I. From the Death of Caesar to the Death of Vitellius (44 BC–AD 69)*. London-Paris 1992.
RPC II	Burnett, A., M. Amandry and I. Carradice, *Roman Provincial Coinage II.I. From Vespasian to Domitian (AD 69–96)*. London-Paris 1999.
RPC III	Amandry, M. and A. Burnett, *Roman Provincial Coinage III.I. Nerva, Trajan and Hadrian (AD 96–138)*. London-Paris 2015.
SEG	*Supplementum Epigraphicum Graecum*
TIB2	Hild, F. and M. Restle, *Kappadokien (Kappadokia, Charsianon, Sebasteia Und Lykandos)*. Tabula Imperii Byzantini 2. Vienna 1981.

TIB4	Belke, K., *Galatien und Lykaonien*. Tabula Imperii Byzantini 4. Vienna 1984.
TIB5	Hild, F. and H. Hellenkemper, *Kilikien und Isaurien*. Tabula Imperii Byzantini 5. Vienna 1990.
TIB6	Soustal, P., *Thrakien* (*Thrake, Rodope und Haimimontos*). Tabula Imperii Byzantini 6. Vienna 1991.
TIB7	Belke, K. and N. Mersich, *Phrygien und Pisidien*. Tabula Imperii Byzantini 7. Vienna 1990.
TIB8	Hellenkemper, H. and F. Hild, *Lykien und Pamphykien*. Tabula Imperii Byzantini 8. Vienna 2004.
TIR K34	Šašel, S. (ed.), *Tabula Imperii Romani, K34* (*Naissus, Dyrrhachion, Scupi, Serdica, Thessalonike*). Ljubljana 1976.
TIR K35.1	Avramea, A., *Tabula Imperii Romani, K35.1* (*Philippi*). Athens 1993.
Yugoslavia I, 1944	*Yugoslavia. Physical Geography*, The Naval Intelligence Division. Geographical Handbook Series (London 1944).
Yugoslavia III, 1944	*Yugoslavia. Population*, The Naval Intelligence Division, Geographical Handbook Series (London 1944).

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CHAPTER 1

Introduction

Luuk de Ligt and John Bintliff

1 Background and Aims*

Urban life and civic organisation are one of the hallmarks of the societies of the Mediterranean world and the Near East in classical antiquity. The ancient urban phenomenon arguably reached its apogee in the Roman world between 150 BCE and CE 250.

Against this background it is totally unsurprising that innumerable Roman cities have been targeted by archaeologists, ancient historians and epigraphists. The tangible outcomes of these efforts include large numbers of books and articles dealing with individual urban centres. The topics dealt with in such publications are quasi-infinite, ranging from political, social, economic and religious life to town-planning and topography. Many epigraphic corpora, such as the *Inschriften griechischer Städte aus Kleinasiens*, contain inscriptions originating from a particular urban centre. While these investigations and compilations have immensely enriched our knowledge of large numbers of cities, the limited geographical scope of many publications makes it difficult to discern regional patterns which existed in a particular historical period or to trace the long-term evolution of regional urban systems.

This book is about regional urban configurations rather than about individual cities or towns. Its primary aim is to demonstrate that important new insights may be obtained by synthesising various types of archaeological and historical data relating to cities which were situated in the same geographical areas.

One topic in the field of Roman urbanism which calls for a regional approach is the impact of incorporation into the Roman empire on existing cities or proto-urban places. While a detailed investigation of archaeological evidence from one particular site may shed important new light on the short-term or long-term impact of Roman conquest on a particular settlement, only an examination of evidence pertaining to large numbers of pre-Roman and Roman settlements can reveal general patterns of continuity or discontinuity.

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The same observation applies to an analysis of locations which were preferred for new town foundations of the Roman period and to the study of the geographical distribution of cities. An in-depth study of one or two well-excavated urban sites will tell us much about the considerations prompting the selection of the sites where these particular cities were established. However, broad generalisations regarding the military, administrative and economic logic of urban constellations which display a limited degree of continuity with pre-Roman times can only be answered by considering large numbers of pre-Roman and Roman sites.

Finally, while a close study of the archaeological evidence from a single city may shed valuable light on levels of economic connectivity and modalities of economic integration, only a region-wide study makes it possible to determine how large a proportion of cities or other 'town-like places' (cf. below) cannot possibly have been sustained solely by the agricultural resources of their administrative or economic hinterlands.

The main focus of all of the fifteen papers contained in this volume is on big questions which can only be answered by considering archaeological, epigraphic and literary evidence relating to large groups of settlements. The other side of the coin is that none of these papers could have been written without the patient efforts of large numbers of archaeologists, epigraphists and numismatists who devoted many person-years of research to the discovery, excavation and interpretation of buildings erected in particular cities or to inscriptions and coins emanating from a particular civic community. In addition, all of the contributors to this volume accept that looking for chronological, spatial or quantitative patterns at the level of large regions cannot be expected to shed much light on the unique histories of those cities which appear as dots on maps or as anonymised components of bar-charts or pie-charts.

Geographically, the main foci of this book are Roman Gaul and Spain, Italy, the Balkan provinces, Asia Minor and North Africa. In selecting these parts of the Roman world for discussion and analysis, we have been guided by the wish to offer case studies of a range of scenarios. While some of the studies undertaken in this volume have a strong Mediterranean focus, others deal with continental provinces, thereby ensuring a good coverage of large swathes of Roman territory characterised by very different environmental and economic conditions. At the same time the ambitious geographical scope of the volume makes it possible to study interactions with a diverse range of background cultures (e.g. La Tène, Punic, Greek, Anatolian) each of which possessed an impressive heritage of pre-Roman urbanism.[1]

1 For a good discussion of the urban system of Roman Britain see Mattingly 2006, Ch. 9; for the urban system of Roman Egypt see de Ligt 2017.

Chronologically, the primary focus of the volume is on the Principate. However, since many parts of Europe, North Africa and western Asia which were incorporated within the Roman empire were already urbanised to various degrees at the time of conquest, pre-Roman patterns of urbanism cannot be ignored. This explains why some of the papers contained in this volume deal extensively with urbanism in Classical and Hellenistic Greece, Sicily and Asia Minor or with urban patterns in Western Europe during the centuries before the Roman conquest. Changes in city size or reconfigurations of regional urban patterns which took place after the mid-third century CE are not investigated in detail, but one contribution provides a helicopter view of urban growth and decline in North Africa between the tenth century BCE and the eighth century CE.

The contributors have not only made a determined attempt to delineate the general shape of regional urban patterns and hierarchies, but also provide a rich variety of interpretative perspectives. While some of the papers focus on the impact of climatological factors or on the geographical distribution of natural resources, others explore relationships between urbanisation and regional population densities or economic relationships between cities and their rural territories. In addition, most papers comment on the short-term or long-term impact of the Roman conquest on existing settlement systems.

Some readers may be surprised to discover that none of the papers contained in this volume uses estimates of the sizes of built-up areas as a basis for inferences about population levels. The main reason for this is that in the absence of secure evidence relating to the size of domestic quarters, the average number of houses per hectare, average building height and the average number of rooms per domestic unit, it is impossible to estimate the approximate number of people who might have lived in a certain city at a certain moment of its existence. Although it might be possible to achieve some progress on this front, a detailed examination of these issues is incompatible with the bird's eye view of Roman urbanism which is one of the hallmarks of this volume.

2 Some Previous Work on Regional Urban Systems by Historians and Classical Archaeologists

Important sources of inspiration for a regional approach to Roman urbanism include Jan de Vries's *European Urbanization 1500–1800* (1984), Paul Bairoch's *La population des villes européennes, 800–1850,* Maria Ginatempo and Lucia Sandri's *L'Italia delle città* (1990), and Paolo Malanima's recent work on the cities

of late-medieval and early-modern Italy. De Vries demonstrated how a close examination of the quantitative properties of urban systems can shed new light on levels and modalities of economic integration. Bairoch, Ginatempo and Sandri, and Malanima collected large amounts of evidence relating to the size of urban populations in order to establish approximate levels of urbanisation.[2]

In the field of ancient Greek studies the geography of the 'city-state' or *polis* was approached with pioneering insight by German scholars working within the *Landeskunde* or Landscape History tradition, best known from the multi-volumed publication by Philippson and Kirsten, *Die Griechischen Landschaften* (1950–1959). In this tradition Herbert Lehmann had earlier used the concept of *Siedlungskammer* (settlement chamber) to identify modular landscape units on Crete occupied by successive settlements in a small-scale migratory pattern over millennia.[3] Kirsten took this idea further in his monograph *Die Griechische Polis als historisch-geographisches Problem des Mittelmeerraumes*, in which he rejected the analysis of Greek states in terms of a modern scale, arguing instead that the traditional Greek village, often in a natural unit of landscape, was a more appropriate model (the *Dorfstaat*).[4] A further, crucial step came with Ruschenbusch's estimation of the size and territorial scale of Greek Aegean *poleis*, which confirmed Kirsten's model.[5]

These attempts to delineate the defining features of the political system and settlement system of Archaic and Classical Greece were accompanied by important methodological advances. The 1960s witnessed the rise of the New Geography movement, typified by quantification and spatial models.[6] This heavily influenced the spatial approaches of the New Archaeology in Britain, notably in the work of David Clarke.[7] John Bintliff, one of Clarke's pupils, brought spatial analysis to the long-term analysis of Greek settlement patterns, where he encountered the fruitful older contributions of the German landscape school. In combination these approaches took the study of Greek regional urban systems into a whole new path, as the contemporary rise of urban survey allowed inferences into the origins, florescence and decline of cities.[8] At the same time the use of insights derived from the strong tradition of

2 de Vries 1984; Bairoch 1988; Ginatempo and Sandri 1990; Malanima 1998; id. 2005.
3 Lehmann 1939.
4 Kirsten 1956.
5 Ruschenbusch 1985.
6 Haggett 1965, Chorley 1967.
7 Clarke 1968 and 1977.
8 Bintliff 1977, 1997, 1999, 2002a; Bintliff and Snodgrass 1985; Bintliff, Farinetti et al. 2017.

historical geography in Britain, particularly in Cambridge, allowed a new rich vein of comparative theory and method to enter the study of Graeco-Roman urbanism.[9]

The approaches pioneered by Kirsten and Ruschenbusch reached a new peak with the landmark publication of Mogens Hansen and Thomas Nielsen's *An Inventory of Archaic and Classical Greek Poleis* (2004), which surveyed more than 1,000 *poleis*. Hansen and his collaborators gave detailed information on city sizes in the Aegean world of the sixth-to-fourth centuries which matched the conclusions of their German predecessors, but went further by including all the cities in the wider Greek colonial world, where the statistics showed slightly larger average towns and matching territories. The inclusion of well-documented discussions of civic magistrates, civic coinages and monumental buildings further increases the value of this *opus magnum*, which has become an indispensable tool for research into the cities of the Greek-speaking world during the eighth-to-fourth centuries BCE.

In the fields of Roman history and Roman archaeology, research into various aspects of regional urban systems started as early as the late nineteenth century. An early illustration is Beloch's survey of the cities of Roman Campania, the first edition of which appeared in 1879.[10] In this monograph Beloch not only discussed the history and political institutions of the Campanian cities, but also their topography. Although many of his interpretations have been revised as a result of later research, this book was an innovative and audacious endeavour.

For reasons which are difficult to fathom it took a relatively long time for Roman historians and Roman archaeologists to follow in Beloch's footsteps by providing more or less comprehensive surveys of Roman urbanism in particular parts of Italy. It was only from the early 1980s that archaeologists began to collect and analyse size estimates and other types of data relating to the walled settlements of various Italian regions. Initially the main focus of these synthetic publications was the pre-Roman and Republican period.[11] Attempts to provide comprehensive surveys of regional urban patterns in imperial Italy did not start until the early 1990s. Examples include Paoletti's discussion of the cities of Roman Lucania, Panero's account of the cities of Piemonte, and an impressive series of short contributions on the towns of Roman Aemilia which

9 Bintliff 2002b.

10 Beloch 1879.

11 Giannini 1981; Sheldon and Hemphill 1981; Fontaine 1990; Spivey and Stoddart 1990; Oakley 1995; de Gennaro 2005; Sewell 2016.

appeared in an important volume published in 2000.[12] Building on these foundations a recent book on the demographic history of Roman Italy provided a list of more than 200 size estimates for the cities of Roman Italy in the early years of the Principate.[13]

Meanwhile other scholars had begun to synthesise large amounts of archaeological data relating to the urban systems of various provinces of the Roman empire. One of the best studies in this field is Goudineau's masterly survey of the cities of the Three Gauls in the first volume of the *Histoire de la France urbaine*, which combined a wide-ranging discussion of archaeological remains with an excellent survey of the epigraphic evidence.[14] In this way Goudineau was able to identify multiple tiers within the urban systems of the Gaulish provinces and to delineate the contours of the urban system of Roman Gaul as a whole. A few years later Roger Wilson wrote a short article which traced the long-term evolution of the urban system of Sicily between Classical times and the period of Arab domination.[15] Martin Millett's 1990 monograph on Roman Britain contained an extremely useful table showing the sizes of all cities and small towns which had earthwork circuits or stone-built walls.[16] Further examples include a long list of published size estimates for the cities of Roman Spain which was compiled by Carreras Montfort, a partial survey of size estimates for the cities of Roman Egypt by Bowman, and an interesting discussion of the sizes of cities in Roman Asia Minor.[17]

As in the fields of Greek history and archaeology, this drive towards data collection was accompanied by the increasing use of models and theories derived from economic geography and other disciplines. In the 1970s David Clarke's pupil Ian Hodder applied some of the techniques of the New Geography to the Roman towns and their associated villa landscapes in Britain.[18] In the 1990s Greg Woolf tried to establish the general shape of the rank-size graph (which plots the statistical correlation of the size of cities to each other) for the cities of the Roman empire, arguing that the curve for the Roman empire was much steeper than that for early-modern Europe. In his view this contrast may be

12 Paoletti 1994; Panero 2000; Marini Calvani 2000. Conventi 2004 provides a useful discussion of the sizes and urban lay-outs of Roman colonies in Italy but focuses primarily on the period of foundation.

13 de Ligt 2012. For an expanded and updated version of this data set see id. 2016.

14 Goudineau 1980.

15 Wilson 1985.

16 Millett 1990: 152–153.

17 Carreras Montfort 1995–1996; Bowman 2000; Hanson 2011.

18 Hodder and Hassall 1971; Hodder and Orton 1976; Hodder and Millet 1980.

explained as reflecting Rome's pre-eminence as the capital of a huge empire and as a largely unintended effect of improved communication in the Roman Mediterranean.[19] More recently, Annalisa Marzano has made an attempt to reconstruct the rank-size graphs for Roman Spain and Britain.[20] Her most provocative observation was that the graph for Roman Lusitania more or less obeyed the 'rank-size rule', meaning that the shape of this graph approximated a straight line with a slope of minus one (45 degrees). She suggested that the urban system of this province might have been characterised by a high degree of integration. Unfortunately, all of her estimates for the cities of the Iberian Peninsula are based on an article by Carreras Montfort, which appeared in 1996. In 2014, however, the same author published a revised list of estimates which differs dramatically from the original version.[21] A re-analysis of the most recent size estimates for the cities of Lusitania leaves no doubt that the rank-size graph for this province sloped down much more gently than claimed by Marzano and therefore did not obey the 'rank-size rule'. The inescapable conclusion is that the urban system of this part of the Roman empire was heterarchical rather than well-integrated.[22]

Until recently no attempts were made to put together a comprehensive *catalogue raisonnée* of the cities of the Roman empire. In 1969 a pioneering article by Norman Pounds provided a highly-stimulating overview article on the nature of Graeco-Roman urban systems seen from the viewpoint of an historical geographer, but even this ambitious survey did not attempt an overall reconstruction of the urban system of the Roman world. A more recent survey article by Andrew Wilson focuses on the largest cities of the Roman empire. While the scope of this article is empire-wide, its value is severely undermined by the use of unreliable size estimates.[23]

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19 Woolf 1997.

20 Marzano 2011.

21 Carreras Montfort 2014.

22 Houten 2018.

23 Wilson 2011. Wilson's estimates for many large cities of Roman Italy are based on the entirely conjectural estimates of Morley (1996: 182). In his discussion of the cities of Roman Sicily he relies heavily on estimates relating to the sixth-to-fourth centuries BC, resulting in an estimate of 200 ha for *Gela*, which was abandoned in Roman imperial times. The value of Wilson's catalogue is further undermined by a consistent failure to distinguish between walled spaces, spaces occupied by walled spaces and cemeteries, and inhabited spaces. Thus *Lepcis Magna* and *Iol Caesarea* are credited with inhabited areas of 452 ha and 318 ha respectively. An inspection of the underlying literature reveals that of the vast area occupied by the city of *Lepcis* and its cemeteries only between 200 ha (Goodchild and Ward-Perkins 1953: 47, followed by de Vita-Evrard 1993: 295, and Ghaddab 2008: 126) and 280 ha (Mattingly 1993: 120) were densely occupied. In the case of *Iol Caesarea*

The only genuinely comprehensive study of urbanism during the late Republic and early Empire is John Hanson's *An Urban Geography of the Roman World*, 100 BCE to 300 CE, which appeared in 2016.[24] A promising feature of this study is that it includes long lists of public buildings, thereby facilitating in-depth explorations of relationships between city size and levels of monumentality and of region-specific patterns in the distribution of various types of public or religious buildings. The main weaknesses of the book stem from the fact that instead of delving into the mountain of publications dealing with individual cities, the author extracted most of his data from regional or provincial data sets published by other scholars. Hanson's lists of theatres, for instance, are largely based on Sear's monograph, which did not aim to provide a comprehensive survey. In other cases the main source of information turns out to have been Smith's *Dictionary of Greek and Roman Geography*, which was published in the mid-nineteenth century.[25]

Similar problems surround Hanson's tallies of the number of cities which can be identified in each province of the Roman empire. His survey of cities in Asia Minor covers 176 cities. This figure corresponds to the number of rank 2 and rank 3 sites which appear on the maps of the *Barrington Atlas*. In reality, however, there were approximately 430 self-governing cities in Roman Asia Minor, of which more than 250 are known to have possessed at least one monumental building.[26] Similarly, while Hanson catalogues only 143 cities for Roman North Africa, Matt Hobson has identified no fewer than 444 towns in the same area, of which at least 362 can be shown to have been either *coloniae* or *municipia* or peregrine *civitates*.[27]

Finally, Hanson's reliance on existing data sets means that the reliability of his size estimates stands or falls with that of his sources. Unfortunately, many of the compilations which he used are of dubious quality.[28] Like Annalisa Marzano's discussion of the urban system of the Iberian Peninsula, his estimates for the cities of Roman Spain rely heavily on the 1996 article by Carreras Montfort. As we have already seen, many of the figures contained in this survey have been revised in a later publication. Similarly, the data set

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estimates for the size of the inhabited space range from 115 ha (McEvedy 2011) to 150 ha (Leveau 1984: 79).

24 Hanson 2016.

25 Sear 2006; Smith 1852–1857. For a more comprehensive, though still incomplete, survey of ancient theatres see Isler 2018.

26 Willet, in this volume.

27 Hobson, in this volume.

28 For this reason the urban population estimates calculated by Hanson 2016: 69–73, and by Hanson and Ortman 2017 must be regarded as resting on very weak foundations.

used by Hanson for the cities of Roman Egypt is not only deficient but also very inaccurate. His estimate for Hellenistic and Roman *Ptolemais* (modern El-Manshah) is a staggering 675 hectares. However, an inspection of the scholarly literature reveals the correct figure to be between 100 and 120 hectares.[29] Hanson's estimate for Roman *Tanis* is 177 hectares. The reader is not told, however, that this figure refers to the size of the entire *tell*, a large part of which was occupied by cemeteries. Another curious case is that of *Aphroditopolis* (modern Atfih), the *metropolis* of the northernmost nome of the Nile valley. Based on a list of estimates published by Bowman,[30] Hanson credits this city with a built-up area of between 100 hectares and 150 hectares, without realising that the original publication underlying these estimates refers to the size of the vast cemetery to the east of the city rather than to that of the city itself.

Most of Hanson's estimates for Roman Greece and Sicily are derived from Hansen and Nielsen's *Inventory of Archaic and Classical Poleis*. While the figures contained in this volume are very accurate, many of them refer to walled areas rather than to built-up areas. On this basis Hanson lists Roman *Argos*, *Tegea*, *Megara* and *Eretria* as occupying areas of 199 ha, 190 ha, 190 ha and 87 ha respectively. We are also told that *Piraeus*, whose street grid occupied an area of 141 ha in the fourth century BCE, recovered after its destruction by Sulla in 86 BCE and that the Sicilian city of *Tauromenion* occupied an area of 65 ha. In reality Roman *Argos* occupied only 50–60 ha, *Tegea* at most 75 ha (on the assumption that the city did not shrink after Classical times), *Megara* between 40 ha and 60 ha and *Eretria* approximately 25–30 ha.[31] Similarly, Hanson fails to inform his readers that of the 65 hectares enclosed by the Hellenistic wall of *Tauromenion* only 28 hectares were occupied by domestic quarters or public buildings.[32]

29 de Ligt 2017: 276, confirmed by Pococke 1743: 82.

30 Bowman 2000: 178; id. 2011: 342.

31 Roman *Argos*: Banaka-Dimaki et al. 1998, Marchetti 2013; *Tegea*: Ødegård 2005; *Megara*: Smith 2008: 16–19, Figs. 7–8; Pausanias' statement (1.36.4) that Roman *Megara* did not flourish is confirmed by various notices in *Archaiologikon Deltion* 31–56 (1976–2001) which report Roman graves within the classical walls and three Roman pottery workshops in the area to the south of the two acropoleis, but none of the urban sanctuaries seems to have been in ruins by the late second century CE; *Eretria*: Schmid 1999, Ducrey 2005. The value of Hanson's catalogue for Greece is further diminished by a mixing up of data relating to homonymous cities. One example is his estimate of 33 ha for the Messenian port town of *Methone*, which has been derived from publications relating to the homonymous town in Thessaly, which Hansen (2006: 101) places at the site of modern Goritsa.

32 de Ligt, in this volume.

Finally, a recent discussion of the Roman finds from *Piraeus* suggests that this part of Athens occupied an area of between 40 ha and 50 ha during the early Empire.[33]

Hanson's estimates for the cities of Roman Asia Minor are based in part on data referring to the Archaic and Classical periods. However, since he also collected published town plans for the Hellenistic and Roman periods, many of his figures for Asia Minor are reasonably accurate. Yet even here an excessive reliance on older publications which have been superseded by recent research has resulted in some estimates which are clearly excessive. Thus *Alexandria Troas* is credited with a built-up area of no less than 287 hectares (based on the assumption that about two thirds of the walled area was built over), implying that it was much larger than *Pergamon*, *Ephesos* and *Smyrna*. Perhaps not surprisingly, this estimate has been greeted with skepticism.[34] Another example is Roman *Ephesos*. According to Hanson, this city covered an area of 263 hectares. However, as the detailed investigations of Stephan Groh and collaborators have demonstrated, Roman *Ephesos* actually had a built-up area of only 185 hectares of which about one quarter (43 hectares) was occupied by public spaces or public buildings or sanctuaries.[35]

It seems fair to conclude that while some important work has already been done, most of the regional systems of many parts of the Roman empire have never been studied properly. As we have explained, part of the reason for this is that large amounts of evidence lie buried in countless publications dealing with individual cities. One of the methodological premises informing the fifteen contributions contained in this volume is that the best way to deal with this problem is not to rely on existing compilations of quantitative or qualitative information but to digest as many of the underlying publications as possible and to use the detailed information contained in them as a basis for discussions of various aspects of the regional urban systems of the Roman world.

3 Defining 'Cities' and 'Towns'

If we want to study 'regional urban systems', we have to know what we mean by the term 'urban'. As is generally known, a good definition of 'cities' or 'towns'

33 Grigoropoulos 2005. For an updated overview of the number and size of cities in the Imperial province of Achaia, Southern Greece, see now Karambinis 2018.

34 Thompson and Wilson 2016: 275–276.

35 Groh 2006.

which is valid and useful for all regions and periods has never been found. Most existing publications try to overcome this problem by privileging one particular aspect of 'urban-ness' over other aspects. It seems, however, preferable to acknowledge the validity of multiple competing definitions and to see competing attempts to distinguish 'cities' or 'towns' from other types of settlements as complementary rather than as mutually exclusive.

In many publications 'cities' are distinguished from other types of settlement on the basis of juridical or administrative classifications. This approach has the advantage of providing us with a clear distinction which reflects the views and definitions of the society under investigation. Moreover, it can be argued that the legal status of pre-modern settlements often had a real impact on the activities of their inhabitants.[36] At least as a general rule, the self-governing cities of the Graeco-Roman world, that is to say, those settlements which functioned as administrative centres of territorial town-country units, tended to have a wider array of public buildings and a larger number of elite dwellings than those agglomerations which were 'secondary' or 'subordinate' from an administrative point of view. In this sense the 'self-governing cities' of the Roman empire were a real phenomenon which has left clear traces in the archaeological record.

One obvious drawback of using an exclusively administrative or juridical approach stems from the fact that the distinction between 'self-governing cities' and 'subordinate settlements' assumes the existence of hierarchical relationships between settlements. However, as Frank Kolb demonstrates in a richly documented study of the long-term evolution of 'urbanism' in Lycia (this volume), the wealthy landowners of this region remained attached to their rural communities until at least the first century BCE. Therefore it took a long time for anything resembling a hierarchical relationship between 'polis centres' and 'subordinate settlements' to develop. Although some Lycian settlements became more 'urban' during the Hellenistic period, the appearance of heavily monumentalised towns was largely a phenomenon of the late first and second centuries CE.

Another problematic feature of approaches which are based on a binary distinction between 'self-governing cities' and 'subordinate settlements' stems from the well-known fact that the criteria guiding the recognition or bestowal of 'city status' differ from period to period and from region to region. The latter half of this observation also applies to the Roman empire during the first

36 Epstein 2001.

250 years of the Principate. In Roman Italy, for instance, we find self-governing towns which covered only 2 hectares, while archaeological research on the settlements of Roman Gaul has revealed the existence of 'secondary' settlements covering up to 80 hectares. The large civilian settlements (*canabae*) which grew up around legionary camps demonstrate some further limitations of a narrowly juridical approach. As Dragana Mladenović points out in her discussion of the urban system of the Pannonian Basin (this volume), jurisdiction in legionary camps was handled by the military commander and the latter's powers must have extended to the *canabae*. Yet inscriptions show that at least some *canabae* possessed a quasi-urban administration with an *ordo* and magistrates, suggesting a limited form of 'self-government'. Moreover, some of the *canabae* of the Pannonian Basin not only occupied areas of up to 150 hectares but also featured a wide array of 'urban' buildings, such as amphitheatres, forum-type squares, aqueducts, temples and bath-houses. There can be no doubt that such settlements performed many functions which were elsewhere fulfilled by self-governing cities.

In part because a purely juridical approach to cities does not do justice to the complexities of the settlement systems of past societies, many historians who are interested in in the long-term evolution of the 'urban systems' of large geographical areas, or in differences or similarities between the urban networks of completely different societies, prefer to use a purely quantitative approach. In such an approach 'cities' are distinguished from 'non-urban settlements' on the basis of quantifiable features such as settlement size or population size. However, while there is substantial agreement that these are important criteria, the critical thresholds which settlements must attain to qualify as 'real' cities differ from study to study. Many publications dealing with the 'cities' of the contemporary world use the label 'urban' exclusively for agglomerations with at least 10,000 inhabitants. In his book on levels of urbanisation in early-modern Europe, however, De Vries operates with a cut-off point of 5,000. Going a significant step further, Bairoch suggested that a population of 2,000 might be a more realistic threshold for many parts of Europe before the Industrial Revolution. This agrees well with the statistical generalization reached by Hansen and Nielsen that the typical Greek city-state in the Aegean had a population range of 2,000–4,000 people. However, anthropological theory coupled with comparative urban studies suggests that 'urban behaviour' can be an emergent property of human communities when they surpass the level of 500–600 inhabitants, and indeed there were many small Greek *poleis* operating at this scale.[37]

37 Bintliff 1999.

The written sources for the Graeco-Roman world contain very few reliable population figures. For this reason the only realistic option is to focus on the size of the areas occupied by cities or 'town-like' settlements (expressed in hectares). However, the basic problem of establishing a meaningful threshold remains. As Kolb explains in his survey of urbanism in Lycia, many of the 'Burgsiedlungen' of the Classical period occupied only a few hectares and cannot have had more than a couple of hundred inhabitants. Even in Roman times the settlement of *Kyaneai*, which shows clear signs of 'urbanity' in this period, appears to have had no more than 150 houses.

In most cases the archaeological record does not permit a reliable estimate of the number of houses which existed in a particular Roman city, and in many cases only very rough estimates of the size of occupied areas can be achieved. It does not follow from this that quantitative approaches to Roman urbanism cannot produce meaningful results under these circumstances. In this volume Frida Pellegrino, Matt Hobson, Rinse Willet, Michalis Karambinis and Luuk de Ligt use size data to assign self-governing cities in various parts of the Roman empire to four or five different size brackets and in order to study the geographical distribution of large, medium-sized and small cities and the long-term evolution of the regional systems of Roman North Africa, Asia Minor, (Greek) Macedonia and Sicily. All of these contributions seek to highlight the quantitative properties of regional systems of settlements which were 'cities' from a juridical point of view. Since self-governing cities could be very small, none of the authors applies a quantitative threshold to distinguish 'real' cities from autonomous settlements which were not 'genuinely urban'.

A third approach is to focus on the 'functions' performed by various types of settlements. In various publications dealing with the 'small towns' of early-modern Europe Peter Clark pointed out that in various parts of the subcontinent even settlements with fewer than 500 inhabitants often had up to twenty non-agricultural occupations.[38] In similar vein, British archaeologists have been calling attention to the 'small towns' of Roman Britain from the early 1970s, while French archaeologists have insisted on the crucial importance of 'secondary agglomerations' (a new term which displaced the older designation *vici* in the 1980s) as centres of trade and production in Roman Gaul.[39] The basic observation which informs studies of this type is that the 'self-governing cities'

38 E.g. Clark 1995: 11.

39 Britain: e.g. Todd 1970; Rodwell and Rowley 1975; Burnham and Wacher 1990; Brown 1995. Gaul: e.g. Piganiol 1975; Mangin et al. 1986; Mangin and Tassaux 1990.

of the societies in question were too few in number to have operated as a fully functional system of 'central places' capable of catering to the needs of rural populations. This crucial observation was eloquently exposed in a pioneering volume by Tonnes Bekker-Nielsen on the official Roman urban network of the North-West provinces and Italy.[40] The small 'town-like' places of these parts of the Roman empire can be seen as filling the gaps in the system left by the self-governing cities, by providing peasants and other country-dwellers with an opportunity to sell their surpluses and to obtain basic goods and services from non-agricultural specialists.

One way of identifying such 'town-like' agglomerations in the Roman empire is to look for archaeological evidence of craft production in 'secondary' or 'subordinate' settlements. Another is to look for evidence of public buildings, such as theatres, sanctuaries or bath-houses. In this volume both Florian Baret and Frédéric Trément and collaborators argue that many Roman settlements of the Massif Central yield evidence of occupational diversity or of the presence of public buildings (or evidence of both). In their view focusing on the few self-governing cities of the Massif Central would result in a very empty 'urban' landscape which makes no sense from a functional point of view. In other words, even if it remains difficult to draw a clear boundary between 'urban' and 'rural' settlements, the 'small towns' of this region cannot be ignored if the aim is to achieve a functional understanding of the 'regional urban systems' which existed during the first and second centuries CE.

Starting from another angle, Frida Pellegrino reaches a very similar conclusion in her discussion of the settlement of the *civitas* of the *Bituriges Cubi*. She argues that the main reason why the *civitas* capital of Bourges did not grow larger than it did (100 ha) was because the *civitas* had a poly-centric settlement system in which resources were shared between the *civitas* capital and two major 'secondary agglomerations', Argenton-Saint-Marcel (70 ha) and Néris-les-Bains (80 ha). Of these two settlements Argenton is known to have had a theatre, an amphitheatre, a monumental fountain, a sanctuary and baths.

The ambiguity of the urban-rural divide is also hinted at in de Ligt's survey of the drastic reconfiguration of the settlement systems of Sicily which took place between the early third century BCE and the late second century CE. As noted earlier, while the label 'self-governing cities' may be safely applied to the Greek *poleis* of early Hellenistic Sicily, some of the interior districts of the island were

40 Bekker-Nielsen 1989. For good discussions of the 'secondary agglomerations' of Roman North Italy (referred to as *vici* in the Italian literature) see Maiuro 2017: 116–124; Santoro 2017.

dotted with large numbers of hill-top settlements which display some urban features (such as stone-built walls and small sanctuaries) but otherwise look thoroughly agricultural. Instead of being dominated by a few 'self-governing cities', the settlement patterns of these areas seem to have been heterarchical. Between the mid-third century BCE and the mid-first century CE the vast majority of these hill-top centres were abandoned, thus creating a striking dearth of 'towns' and 'town-like' settlements in large parts of Sicily. Interestingly, this void was gradually filled by the appearance of 'agro-towns'.[41] In some areas this development may have started as early as the first or second century CE, but in most parts of the island town-like secondary agglomerations did not take off before late Antiquity.

4 Diachronic Approaches to Regional Urban Systems

Regional urban systems can be studied in multiple ways. It has often been pointed out that the Roman system of government was based on delegation of the primary goals of administration, namely the collection of taxes and the maintenance of law and order, to self-governing cities. For this reason the Romans were inclined to preserve the cities and urban systems of regions which were already urbanised at the time of conquest. It follows from this that an examination of the relationships between pre-Roman and Roman settlement patterns may help to explain the geographical distribution of self-governing cities and secondary town-like places during the first two centuries CE.

The relative dearth of self-governing cities in the Three Gauls can be explained in part as reflecting the existence of a relatively small number of large 'tribal' territorial units in pre-Roman Gaul. Many of these territories were far too large to be administered directly from their *civitas* capitals. At the same time populations of the peripheral districts had to market some of their surpluses and needed at least some 'urban' goods and services. Therefore the rarity of '*civitas* capitals' in the Three Gaul helps to explain the town-like appearance of some of the 'secondary agglomerations' examined by Florian Baret and by Frédéric Trément and collaborators. Moreover, as Frida Pellegrino points out in her contribution, there are strong indications that the multi-polar urban system which existed in the territory of the *Bituriges Cubi* during the early Empire

41 For a more extensive discussion of the appearance of 'agro-towns' in Sicily see Bintliff 2018.

perpetuates a pattern which already existed in pre-Roman times. It is impossible to avoid the conclusion that in this part of Gaul resources continued to be distributed between the capital and a number of subordinate urban centres after Bourges became the '*civitas* capital'.

In the case of Gaul significant discontinuities can also be observed. Important colonies for the veterans of Caesar and the Triumviri were founded in Gallia Narbonensis. In the Three Gauls some pre-Roman *civitates* were degraded to *pagi*, while some entirely new *civitates* appeared out of nowhere. In addition, there can be no doubt that the creation of new *civitas* capitals in various *civitates* brought about the decline of pre-Roman *civitas* centres. As Manuel Fernández-Götz explains in his paper on the pre-Roman *oppida* of Europe, the creation of *Augusta Treverorum* and *Augustodunum* triggered the decline of the Titelberg and *Bibracte*. In a contribution on the settlement system of the territory of the *Arverni* Frédéric Trément and collaborators point out that a similar development took place after *Augustonemetum* (Clermont-Ferrand) had been established as the administrative centre of the *civitas*: all pre-Roman *oppida* which were situated within a distance of less than 12 km were either abandoned or show signs of stifled development. Interestingly, however, secondary agglomerations which were situated beyond this range appear to have flourished. Examples include the *oppidum* of Corent, which had a temple and a theatre, the Col de Ceyssat, which had a temple, and the pottery complex of Lezoux, whose 'urban' credentials remain however doubtful.

The theme of continuity and discontinuity also looms large in many other papers. Frank Vermeulen argues that the urban landscape of Roman *Picenum* was largely a new Roman creation. The small number of pre-Roman centres that survived (mainly *Camerinum*, *Asculum* and *Ancona*) paled into insignificance compared to the Latin colonies and *coloniae civum Romanorum* of the third and second centuries BCE, and some of the *conciliabula* which were promoted to municipal status in the mid-first century BCE were also of Roman origin. As Vermeulen explains, this drastic reconfiguration reflects the disruptive impact of the Roman conquest of the third century BCE.

In many other parts of the empire there is evidence for a much higher degree of continuity. In a wide-ranging survey of the long-term evolution of the settlement systems of the Iberian Peninsula, Oliva Rodríguez Gutiérrez argues that the southern and eastern regions already had well-developed urban systems at the time of the Roman conquest. In these areas the Romans consolidated existing urban nuclei, but also streamlined the settlement system by promoting to superior juridical statuses a limited number of cities which were located near mines or large stretches of fertile land. In the Central Plateau many existing territorial patterns were also preserved, but in this part of the Peninsula some

hill-top *oppida* were abandoned in favour of settlements which were located in the plains. A third pattern can be discerned in the north-western regions which were only pacified in the 20s BCE. In these areas existing settlement systems were preserved, but in order to facilitate administration a few *castros* were promoted as regional centres. In addition, a few new cities were founded on the sites of pre-Roman settlements. As Rodríguez Gutiérrez notes, the enormously diversified nature of social structures in the Iberian Peninsula at the time of the Roman conquest precludes the applicability of any region-specific model to other areas.

Further examples of region-specific trajectories may be found in Kolb's chapter on Lycia and in Michalis Karambinis's chapter on the Roman province of Macedonia. It has already been noted that the archaeological and epigraphical evidence from Classical, Hellenistic and Roman Lycia points to a gradual shift from a heterarchical settlement system characterised by the absence of fully-fledged towns, to a more hierarchical systems in which a limited number of recognisably urban settlements grew larger (but not much larger) than other types of settlement.

Developments in Roman Macedonia appear to have been completely different. Michalis Karambinis argues that both before and after the Roman conquest the urban landscape of northern Greece was a patchwork of relatively small *poleis* each of which was sustained by food crops grown in its administrative territory. Yet some important reconfigurations can also be observed. When the Roman colony of *Philippi* was founded, six other towns were deprived of their territories, and the same probably happened when the colony of *Dion* was established. More generally, the number of self-governing cities in Roman Macedonia declined significantly between late Classical and Roman times. What is also striking is that the Roman authorities made no attempt to revive the old capital city of *Pella*, feeding the suspicion that they deliberately decided not to create the conditions that would enable this city to regain some of its former splendour, while encouraging the growth of *Thessalonike*, a city that had proved favourable to Rome. The highly-disruptive and frequently violent nature of Roman remodeling of the urban system of all parts of Greece extends to the more southerly province of Achaia, where also parallels to similar reorientations in Sicily can be observed.[42]

In his paper on the urban systems of Hellenistic and Roman Sicily Luuk de Ligt argues that although some continuities between these two periods can be observed, the overall picture is one of striking discontinuity. Both in

42 Karambinis 2018; see also Bintliff 2012: Ch. 13, and id. 2018.

early Hellenistic times and during the first two centuries CE Syracuse was the most important city of the island, but Roman Syracuse seems to have been about one third smaller than its Hellenistic predecessor. A few other coastal cities seem to have expanded during the Republic and early Empire, but many other cities declined or were completely abandoned. What is particularly striking is the abandonment of tens of fortified hill-top settlements in the interior districts of the island. While the latter phenomenon can to some extent be attributed to an improvement in security, the overwhelmingly coastal emphasis of the urban system of the first-to-early third centuries CE also reflects the long-term impact of the introduction of a new tax system in which taxes in kind were carried to a handful of port cities for shipment to central-western Italy.

Two further patterns emerge from Dragana Mladenović's chapter on the Roman towns of the Pannonian Basin and from Damjan Donev's paper on the 'small *municipia*' of the Balkan and Danube provinces. Without delving deeply into the difficult problem of possible continuities between the late La Tène agglomerations of the Pannonian Basin and the military camps and civilian towns of the early-imperial period, Mladenović observes that of the 13 certain or possible *municipia* that existed in this region by the mid-second century CE, 11 were situated either near convenient river crossings or along the Amber Road or along the *via militaris* between Italy and the East. Almost all of these cities were garrisoned at some moments in their long histories. The basic facts point to the overriding importance of strategic and logistical considerations in the development of the urban system of early-imperial times.

Focusing on another aspect of the urban system of the Balkan provinces, Damjan Donev calls attention to the fact that many of the *municipia* which existed in the non-militarised areas behind the western parts of the Danubian *limes* were both extremely small and widely spaced, implying enormous sizes for their administrative territories. At the same time the archaeological record of these small towns is extremely poor in terms of the evidence for monumental buildings. Donev argues that these indications reveal a pressing concern to secure full administrative coverage of the provincial territories, prompting the Roman authorities to install self-governing cities even in areas in which the right environmental and demographic conditions for effective self-government did not exist.

One of the lessons to be learned from this wide variety of regional trajectories is that the historical evolution of regional settlement systems can only be understood by examining a whole series of region-specific factors. Yet some basic patterns seem to emerge. In a few areas (such as Picenum in the third century BCE and Epirus and Aetolia-Akarnania in north-west Greece in the sec-

ond century BCE),[43] large-scale massacres or population transfers followed by large-scale confiscations of agricultural land resulted in a striking degree of settlement discontinuity. A different kind of discontinuity can be observed on the northern frontier of the Roman empire in the early first century CE. Here the paramount importance of military and logistical considerations promoted the development of newly created and existing settlements which were situated near important river crossings or at other key points in the road network. In non-militarised areas, however, large portions of existing settlement systems were usually preserved. However, as many of the contributions contained in this volume show, such existing settlement patterns were often streamlined to suit the interests of the Roman administration, by thinning out urban systems containing large numbers of closely spaced small towns, by moving existing settlements to locations along roads and/or rivers, or by establishing entirely new cities in such locations. The period between the mid-second century BCE and the early second century CE also witnessed the conquest or incorporation of various regions whose settlement systems were poly-centric or heterarchical or simply underdeveloped. While the poly-centric settlement systems of some regions were preserved, there was a clear tendency to promote a few towns belonging to previously heterarchical systems and to fill 'voids' in existing urban systems, by creating new towns which could be made responsible for the basic tasks of tax collection and maintaining law and order. However, in many previously under-urbanised regions such as Gallia and Britannia, Rome seems to have left effective service centre provision for rural populations to spontaneously emerging centres, arising from rural demand, which rarely achieved juridical urban status.

5 Synchronic Approaches to Regional Urban Systems

While diachronic approaches to regional urban systems focus on path dependencies, long-term transformations of settlement systems and decisions taken by generals, emperors and administrators, synchronic interpretations focus on climatic and environmental factors, on economic relationships between cities and their territories or hinterlands, on hierarchical relationships between cities and on interactions between cities belonging to the same regional system.

Climatic conditions and landscape features play an important part in Matt Hobson's attempt to account for the spatial distribution of large, medium-sized

43 Lang 1994.

and small cities in the vast area stretching from Mauritania Tingitana to Tripolitania. Perhaps not surprisingly, this huge 'region' turns out to consist of several sub-regions each of which displays a distinctive pattern of urbanisation. Of the ten North-African cities which covered more than 100 hectares, eight were situated along the open eastern seaboard of Africa Proconsularis or in its immediate vicinity. In contrast to this, the more rugged coast of Mauritania Caesariensis had far fewer large cities. Levels of precipitation were another important factor in shaping regional patterns of urbanisation. The largest ten cities of Roman North Africa were either situated in areas which received at least 400 mm of rainfall annually or were closely connected to hinterlands which rose above the 400 mm per annum isohyet. Finally it appears that unusually large cities such as Carthage and *Lepcis Magna* also controlled unusually large territories, suggesting that such cities could be sustained by their agricultural hinterland, except perhaps in years of harvest failure.

The relationship between the geographical distribution of agricultural resources and regional urbanisation patterns are also investigated in Rinse Willet's chapter on the self-governing cities of Roman Asia Minor, building on pioneer work for Byzantine Anatolia by the historical geographer Johannes Koder.[44] The starting point of Willet's analysis is the detailed data on levels of cereal production and numbers of livestock which were collected for the purposes of the Turkish census of 1927. Based on these datasets the striking concentration of large and medium-sized cities in the coastal districts of the Roman province of Asia can convincingly be explained as reflecting high levels of grain production, while an emphasis on livestock-raising might help to account for the dearth of self-governing cities in large parts of the Central Plateau. In the case of the Southern Coastlands the simultaneous existence of many large and medium-sized cities in the Roman period seems to be at odds with the low levels of grain production indicated by the 1927 figures, but this can be explained by the spread of malaria in the coastal regions of southern Anatolia in medieval and early-modern times.

Various theoretical approaches can be used to bring relationships between regional urban patterns and underlying economic structures into sharper focus. One of these approaches is Walter Christallers' Central Place Theory, which became popular among adherents of the 'New Archaeology' of the 1960s and 1970s.[45] Although Christaller developed multiple models designed to capture societies characterised by various types and levels of economic integra-

44 Koder 2012.
45 Cf. Grant 1986.

tion, most of his work focussed on cities and lower-order 'central places' as providers of goods and services to the populations of their economic catchment areas. In this model central places belonging to various tiers of the settlement system compete for the custom of the inhabitants of the surrounding districts. These competitive dynamics give rise to a complicated pattern of (hexagonal) catchment areas which minimises travelling time to the nearest market centre.[46]

Against this the American anthropologist Carol Smith has argued that the urban-dominated market systems of many historical societies have been 'monopolistic' rather than competitive and well-integrated.[47] The overall thrust of her work was to identify non-competitive market systems as an important mechanism for the creaming off of agricultural surpluses by town-based elites. This alternative approach has inspired a considerable amount of research by archaeologists and ancient historians. However, as some of these researchers have pointed out, Smith's emphasis on surplus extraction through urban markets entails the danger of losing sight of land ownership as the main vehicle for exploitation in most pre-modern societies.[48]

About thirty years ago the continuing vitality of Central Place Theory in Roman urban systems was demonstrated in a highly-insightful analysis by Kunow.[49] He not only provided one of the best expositions of the theory, but applied it to the Roman towns and military foci of the province of Germania Inferior. He first demonstrated that the low levels of settlement and economic complexity of the northern regions of this province led to a central place network following Christaller's Transport Principle, a linear-based system largely networking the Roman army *limes* centres. In contrast, in the more southerly districts of Germania Inferior the widespread development of civilian towns and associated rural villas supported a more typical 'servicing principle' set of hexagonal territories based on a two-dimensional set of interlocking cells each focussed on a town and its associated rural territory. In this volume Kunow's conclusions regarding settlement patterns in the northern parts of Germania Inferior are echoed by Frida Pellegrino's observation that in the area between Tongeren (*Atuatuca*) and Cologne secondary central places appear to have been situated along the important road connecting these cities.

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46 Christaller 1966; Hodder and Hassall 1971.

47 Smith 1976.

48 de Ligt 1993.

49 Kunow 1988. For an excellent discussion of the enduring applicability of modified versions of Central Place Theory see Vionis and Papantoniou 2019.

Most of the regional urban systems which are examined in this volume conform neither to Christaller's model of interlocking 'central places' nor to Smith's alternative model of monopolistic surplus extraction through non-competitive market exchange. At the same time the role of official cities and lower-order settlements as 'central places' for the surrounding districts remains a valid topic for investigation. As Vermeulen points out in his contribution, many of the urban centres of early-imperial Picenum originated as 'central places' catering to the needs of the country-dwelling population and continued to play this role after their promotion to official urban status. Interestingly, the 'economic functionality' of large segments of the urban system of the Adriatic region resulted in an unusually dense pattern in which the average distance between neighbouring cities did not exceed fifteen kilometres.

It is instructive to compare the urban system of Adriatic Italy with that of the Roman Massif Central. In this part of Roman Gaul settlements with official urban status were few and far between. However, as Florian Baret and Frédéric Trément and collaborators demonstrate, the huge gaps left by the thin veneer of official cities were filled by secondary agglomerations which clearly functioned as local market centres (cf. above).

Based on these examples it may be suggested that the added value of a 'central place' perspective on the regional urban systems of the Roman empire is particularly evident in studies focusing on the complementary roles played by self-governing cities and 'town-like' settlements in well-populated areas whose inhabitants did not have easy access to a nearby official town.

When it comes to investigating levels of economic integration among the cities of a large geographical unit, such as a large modern nation state or a province of the Roman empire, rank-size analysis is a much better tool than Central Place Theory. In her chapter on the urban systems of Roman-imperial Gaul and Britain, Frida Pellegrino draws attention to Guérin-Pace's observation that during the nineteenth and twentieth century the rank-size distribution of French cities followed a linear power law.[50] In contrast to this, the rank-size distribution for the self-governing cities of Roman Gaul during the first two-and-a-half centuries of the imperial period appears to have been concave, with medium-sized cities being heavily over-represented and the largest cities being much smaller than predicted by a power-law distribution. Pellegrino interprets this in two ways: firstly as an indication that the vast majority of cities in Roman Gaul were sustained by their agricultural territories, and secondly as suggest-

50 Guérin-Pace 1995.

ing that the urban system of the Gaulish provinces was made up of a series of separate urban hierarchies each of which was dominated by a large focal city.

In his contribution on Roman Macedonia and Aegean Thrace Michalis Karambinis observes that the rank-size graph for the cities of these regions is roughly linear. However, since the graph slopes down less steeply than predicted by the 'rank-size rule', and also because the medium-sized and small cities of Macedonia and Aegean Thrace tend to cluster in relatively small size brackets, he concludes that these parts of the Roman Empire were characterised by a low level of economic integration.

Another way of assessing levels of economic integration is to examine whether the amounts of arable land contained in the administrative territories of the largest cities of a particular province or region were large enough to sustain their populations. As we have already seen, Matt Hobson is inclined to answer this question affirmatively in the case of Carthage and *Lepcis Magna*. With regard to the cities of Roman Macedonia, Michalis Karambinis argues that the territorial realignments of the early-Hellenistic period had provided *Thessalonike* with a territory which was large enough to sustain its urban population. In addition, he identifies the enlargement of the territories of the two Roman colonies of *Philippi* and *Dion* at the expense of neighbouring towns, as one of the reasons why these cities flourished during the early Empire. However, in her contribution on the cities of Roman Gaul, Frida Pellegrino identifies Lyon as a city whose agricultural territory seems to have been too small to sustain the urban population. Income from entrepôt trade might well be part of the solution, but Lyon is also known to have attracted wealthy members of the elites of neighbouring *civitates*. We need to remind ourselves that the Roman empire was characterised by a high degree of personal and economic mobility and widespread breakdown of former political boundaries,[51] so that a primate town could attract population from well outside of its official juridical boundaries.

While the vast majority of cities referred to in this volume seem to have been sustained by crops grown in their administrative hinterlands, there are strong reasons to think that a high degree of self-reliance in terms of cereal crops went hand in hand with surplus agricultural production for export at a considerable scale. Discussing relationships between the growth of cities along the North-African littoral and settlement trends in the interior districts, David Stone calls attention to the fact that farms that produced olive oil for export were located not only in the coastal zone but also in areas that were between

51 Cf. Isayev 2015.

150 km and 300 km away from the coast. The oil produced in these inland districts must have been carried overland to port cities, where it would have been decanted into stable portable containers before shipment to Rome or other destinations. This scenario is confirmed by the discovery of kilns producing a range of amphora types in many major cities, notably at *Leptiminus*.[52] However, a close examination of the archaeological record reveals that levels of agricultural production for export varied considerably between regions, with Byzacena and Zeugitana having more extensive harbour facilities than either Tripolitania or Mauritania Caesariensis.[53] Since the second-to-fifth centuries CE also witnessed the decline of some port cities and the rise of others, the only possible conclusion is that we are dealing with a large number of region-specific scenarios.

The theme of connectivity also plays an important part in the attempts of many other contributors to account for the geographical distribution of large, medium-sized and small cities in their research areas. With regard to Picenum, Frank Vermeulen notes that the coastal towns of this region display more signs of urban expansion and development than most of the towns of the interior districts. Part of his explanation focuses on the importance of sea-links with Rome and the wider Mediterranean and on the causal connection between high levels of connectivity and high levels of elite investment in wine production and other commercial enterprises. In her paper on the Iberian Peninsula Oliva Rodríguez Gutiérrez attributes the prosperity of cities such as *Hispalis*, *Onuba*, *Gades*, and *Valentia* to their role as harbours which linked land routes and fluvial routes with sea trade. In similar vein Rinse Willet and Matt Hobson call attention to the fact that all of the largest cities of Roman Asia Minor and North Africa (> 160 ha) were situated on the coast or in its immediate vicinity. Going a significant step further, Luuk de Ligt's article on Hellenistic and Roman Sicily highlights the advantages of being on the coastal interface with Italy, North Africa and the eastern Mediterranean as the single-most important factor in the reconfiguration of the island's urban system, echoing the earlier observations of Susan Alcock on the deliberate creation of, or promotion of, Roman coastal towns on the long-distance trade routes in the province of Achaia.[54]

52 Stone, Mattingly et al. 2011.

53 The relative dearth of harbour facilities in Mauritania Caesariensis is in line with Matt Hobson's observation (in this volume) that the economies of Numidia and Mauritania Caesariensis were much more inward-looking than those of Africa Proconsularis and Tripolitania.

54 Alcock 1993.

Both in Roman Asia Minor and in Roman North Africa some important inland cities, such as *Samosata* and *Melitene* in Asia Minor and *Uthina* and *Thubursicu Numidarum* in North Africa, were situated beside perennial rivers or wadis. In the Iberian Peninsula various important Roman cities, such as *Corduba, Emerita* and *Caesaraugusta*, were river ports. In the Pannonian Basin *all* the important cities were situated along the Upper Danube (the link to the *limes* being decisive here), while some medium-sized cities were located beside the Sava or the Drava. While the advantages of transportation are an important part of the explanation, Dragana Mladenović argues that the locations of many of these cities also reflect the availability of river-crossings. The contribution by Frédéric Trément and collaborators draws attention to the fact that in Central Gaul navigable rivers not only influenced the locations of self-governing cities but also those of many 'secondary agglomerations'. In the territory of the *Arverni* the Allier appears to have been an important transportation route that played a significant role in the development of the network of agglomerations in the Clermont basin. It has already been pointed out that at least some of these 'secondary agglomerations' displayed various town-like features.

Connections between the geographical distribution of cities and the road system of the first-to-third centuries CE are less straightforward.[55] As noted by Rinse Willet, most of the Roman roads of Asia Minor were built primarily to facilitate military transport and communication between Roman administrators. In line with these principles the earliest roads specifically target the central cities of the assize districts (*conventus*). However, since this road network was also used by merchants and travellers, its existence also facilitated communication between cities.

While in the case of Asia Minor existing urban patterns played an important part in shaping the road network of the late-republican and early-imperial periods, the reverse situation can be observed in various other parts of the empire. In Picenum newly-built roads such as the *Via Flaminia* and the *Via Salaria* shaped the urban system of the late-republican and early-imperial periods in a major way, down to the level of new town growth in various locations along these novel transportation axes. With regard to Macedonia and coastal Thrace Michalis Karambinis observes that the building of the *Via Egnatia* resulted in a realignment of communication routes, which triggered the foundations of *Topeiros*, *Traianoupolis*, *Plotinopolis* and *Hadrianoupolis*. Similarly, Damjan

55 For an excellent discussion of the complicated relationships between road building, economic integration and the evolution of settlement patterns in various parts of Roman Italy see Witcher 2017: 37–41.

Donev and Dragana Mladenović emphasise the importance of military roads as attractors of urban development in the Pannonian Basin, while Matt Hobson calls attention to the string of important cities (including *Lambaesis*, *Thamugadi*, *Theveste*, and *Thelepte*) lining the important military trunk road running along the Aurès mountains.

Roman Gaul and the Iberian Peninsula present a mixed picture. While some Roman roads connected surviving Gallic *oppida* which had been elevated to the status of '*civitas* capitals', a considerable number of mountain strongholds were abandoned. As Manuel Fernández-Götz explains, these strongholds were replaced by new settlements in the plain which were better suited to the logic of communication, trade and production. The *Pax Romana* will have reduced the advantages of hilltop foci, and the new towns often exploited the same resources as their predecessors but from a more advantageous distance. A somewhat similar reconfiguration of regional urban systems can be observed in Central Spain. As in various parts of Gaul, the Romans forced some of the indigenous hilltop settlements of this area to descend to the plain. According to Oliva Rodríguez Gutiérrez these resettlements were aimed not only at facilitating control over the communities concerned, but also at achieving a more efficient articulation of settlements around lines of communication.

Focusing on the period when the Roman road network of Central Gaul had already been created, Frédéric Trément and his collaborators call attention to the importance of Roman roads in stimulating production for regional or distant markets. While a large proportion of the pottery produced at Lezoux was carried to the Allier river for further transportation, large amounts of pottery also travelled west or east along the Agrippan Way connecting Lyon and Saintes (*Mediolanum Santonum*). Along this road we find a considerable number of strikingly large secondary agglomerations (occupying up to 40 hectares) some of which have yielded evidence of temples, bath buildings or craft activities. In addition, a local road connected the workshops of Lezoux with *Augustonemetum*. It is therefore difficult to avoid the conclusion that the construction of major or secondary roads helped to connect various districts of the territory of the *Arverni* to local, regional or more distant markets.

Finally, two of the contributions contained in this volume call attention to the existence of region-specific townscapes. Inspired by the concept of Critical Regionalism, Dragana Mladenović notes that the riverine locations of many Roman cities of the Pannonian Basin meant that the local authorities had to take measures to prevent flooding and erosion of river banks. This combination of natural factors and human interventions must have given these cities a distinctive appearance, dominated by waterfronts, watercourses, man-made ditches and surrounding wetlands. This would not only have dictated land use

but would also have resulted in a region-specific 'experience' of these settlements. *Aquileia* at the head of the Adriatic offers a well-researched parallel.[56]

Adopting a different perspective on region-specific townscapes, Paul Scheding argues that in the Roman province of Africa Proconsularis, region-specific types of urban planning and monumentalisation correlate not only with differences in regional urban densities but also with differences in economic and social structures. One of his main points is that whereas many cities in southern Proconsularis had multiple public plazas, *Thugga*, *Thuburbo Maius* and other cities in the northern half of the province made do with just a single *forum*. Part of the explanation must be that because the cities of northern Proconsularis were densely spaced, they did not need to have the capacity to welcome many people at one time. At the same time, large rural estates in northern Proconsularis were subdivided into small plots which were farmed by *coloni*, whereas large slave-run estates are believed to have been common in the southern and western parts of the province. Based on these observations Scheding suggests that social interaction in the small cities of northern Proconsularis took the form of small-scale meetings involving members of local interest groups, ranging from the members of the local town council to representatives of the *coloni*. This hypothesis would help to explain why the elites of the small cities of the *pertica Carthaginiensis* used their money to finance the construction of small-scale spaces which turned their back on the public streets.

6 Concluding Observations

Each city of the Roman empire was set in a natural environment that was to some extent unique and a considerable number of cities benefited from the availability of exceptionally fertile soils, rich metalliferous ores or other natural resources that were unevenly spread across the landscape. In addition, political, social, cultural and economic life in a particular city was affected by historical events or circumstances that were to some extent city-specific. Following the Roman conquest many existing city-networks were incorporated almost wholesale as centres of self-governing town-country units, but in many parts of the empire cities of pre-Roman origin coexisted with newly established and intrusive veteran colonies. Further divergences occurred as a result of other factors. Choosing the wrong side in a civil war might result in total destruction, the establishment of a veteran colony might completely alter the

56 Groh 2012.

composition of an urban population, and imperial favour or the goodwill of a single local benefactor might have a profound impact on local townscapes. It may therefore be argued that a research strategy focusing on one particular city is entirely appropriate if the aim is to gain a deep understanding of political, social, cultural or economic continuities or discontinuities at a local level, despite Finley's often-quoted assertion that the study of individual cities is a cul-de-sac.[57]

While the contributors to this volume have no quarrel with an emphasis on the uniqueness of each city, their endeavour is informed by the assumption that some important new insights may be obtained by combining local data into regional patterns. It is only by adopting a regional approach that we can begin to assess the circumstances in which Roman administrators were both able and willing to delegate administrative duties to existing urban systems after conquering new territories. Similarly, only a regional approach to the urban systems of the Roman world makes it possible to detect various unintended effects of imperial conquest, such as the thinning out of dense urban patterns of pre-Roman origin or the growth of cities which benefited from a high degree of connectivity with other parts of the empire. Thirdly, approaches focusing on city-size distributions at a regional or provincial level, or on relationships between the size of cities and the size of their productive territories, help us to advance the ongoing debate about levels of economic integration.

Most of the fifteen papers in this volume use a variety of regional approaches to shed new light on Roman policies regarding the preservation, transformation or creation of cities, or to establish connections between regional urban patterns and the underlying structures of the political economy of the Roman empire. However, as noted in the previous section, Paul Scheding demonstrates that the potential of regional approaches extends to relationships between the density of regional urban networks and the presence or absence of particular monumentalised spaces in the cities belonging to these networks. In other words, a regional perspective not only makes it possible to identify regional patterns of monumentalisation but also to explain them.

The editors do not claim that the wide-ranging analyses presented in this volume add up to an exhaustive list of the promises held out by the adoption of a regional perspective on the cities of the Roman empire. They do, however, hope that this volume demonstrates the added value of such a perspective and that it will stimulate other researchers to pay more attention to region-specific trajectories of urban development during the first-to-third centuries CE.

57 Finley 1977: 325.

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CHAPTER 2

A World of 200 *Oppida*: Pre-Roman Urbanism in Temperate Europe*

Manuel Fernández-Götz

1 Towns before the Romans: Reassessing the Iron Age Evidence in the *Longue Durée*

Despite the persistence of some popular views that link the appearance of urbanism with Roman expansion, there is a long tradition of scholarship that identifies the first cities and towns of Temperate Europe with the large fortified sites of the second-first centuries BCE known as *oppida*.[1] There are currently more than 180 known *oppida* between France in the west and Hungary in the east (Fig. 2.1), to which we could add some examples in Britain and numerous sites in central-northern Iberia which have traditionally not been taken into account by mainstream narratives.[2] In this paper, I will focus on the evidence from continental non-Mediterranean Europe, with only some occasional reference to Britain and Iberia, and leaving aside the sites classified as *oppida* in other areas, such as southern France, which present different characteristics and trajectories.

The close temporal relationship between the development of numerous Temperate European *oppida* at the end of the second century BCE and the growing Roman expansion with the conquest of southern Gaul (Gallia Narbonensis) in the 120s BCE has led some scholars to see the *oppida* as an indigenous reaction to Rome or as a 'barbarian' emulation of Mediterranean urbanism. The threat posed by the migrations of the Cimbri and Teutones in the last two decades of the second century BCE has also been mentioned as one of the push factors for the large-scale appearance of *oppida* in Gaul and other nearby areas.

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* The title of my paper is directly inspired by the ERC project *An Empire of 2000 Cities: Urban Networks and Economic Integration in the Roman Empire*, which led to the publication of the present volume.

1 Collis 1984 and 2000; Fichtl 2005a; Wells 1984.

2 France and Central Europe: Fichtl 2005a and 2012a; Pierrevelcin 2012; Rieckhoff and Fichtl 2011; Britain: Haselgrove 2000; Moore 2012; Iberia: Almagro-Gorbea 1995; Álvarez-Sanchís et al. 2011.

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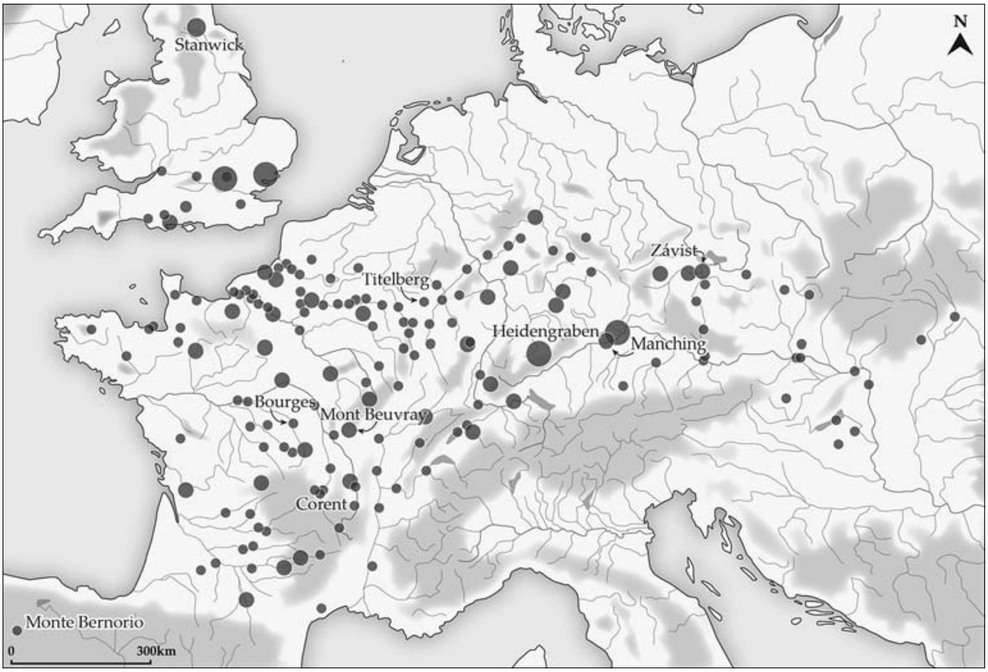

FIGURE 2.1 Distribution of fortified *oppida* with some of the main sites indicated, second–first centuries BCE
AFTER FERNÁNDEZ-GÖTZ 2018, BASED ON DATA FROM HTTP://WWW.OPPIDA.ORG/, WITH ADDITIONS

Finally, some authors have defended the hypothesis of a supposed 'export' of Mediterranean urban models by the Boii of northern Italy, who would have immigrated back to Central Europe following their defeat by the Romans and the latter's occupation of the Po Valley. However, a reassessment of the Iron Age evidence shows a much more complex picture, which does not deny the connections with some historical events and in particular with the rise of the Roman state, but also acknowledges the importance of internal developments among Temperate European societies. In order to gain a more complete understanding, it is necessary to place the development of the *oppida* within a longer temporal perspective.[3]

To start with, new research has confirmed the existence of various cycles of centralisation and decentralisation in Iron Age Europe.[4] A first process of centralisation had already taken place in the Early Iron Age, in particular the

3 Guichard et al. 2000; Fernández-Götz 2018; Sievers and Schönfelder 2012.
4 Brun 2015; Fernández-Götz 2018; Fernández-Götz et al. 2014; Krausse 2008; Salač 2014.

Late Hallstatt period (c. 620–450 BCE), leading to the development of some large sites that have been defined as urban or proto-urban by numerous scholars.[5] Located between Bohemia and central France, these settlements, usually known as *Fürstensitze* ('princely seats') in the archaeological literature, were complex central places that, in some cases, covered several dozens of hectares and were surrounded by rich elite burials under tumuli.[6] Among the most spectacular examples are the Heuneburg in Baden-Württemberg and Bourges in Berry. With an area of c. 100 hectares and an estimated population of 5,000 inhabitants during the first half of the sixth century BCE, the Heuneburg acted as a focal centre of power which performed an important economic and, probably, a political role. Particularly outstanding are the Mediterranean-inspired mudbrick wall on the plateau and the fortification systems of the so-called lower town including a monumental gatehouse.[7] In the case of Bourges, recent research has uncovered indications of a very large settlement of at least 200 hectares in Hallstatt D3/La Tène A1, thus predating, by several centuries, the *oppidum* of *Avaricum* described by Julius Caesar at the same location.[8]

But this process towards early urbanisation was fragile and short-lived, coming to an end during the fifth century BCE.[9] While some *Fürstensitze*, such as the Heuneburg or Mont Lassois, were abandoned (or most likely violently destroyed) in the middle of that century, others continued to be occupied for a few generations before their final decline around 400 BCE. The causes for this disruption were probably manifold and potentially interrelated. Among the main explanations we could cite are peer polity competition that could have led to episodes of warfare, internal reactions against growing social inequalities, or climatic changes resulting in crises and perhaps migration.[10] In any case, during the fourth and early third centuries BCE we observe a more decentralised settlement pattern in the regions north of the Alps, while written sources refer to the existence of population movements towards Italy and the Balkans, the so-called 'Celtic' migrations.

A new trend towards centralisation and later urbanisation can be traced since the third century BCE and then increasingly in the early second century BCE, with the development of a number of large open agglomerations

5 Cf. recent discussions in Brun and Chaume 2013; Fernández-Götz and Ralston 2017; Krausse et al. 2016.
6 Krausse 2010.
7 Fernández-Götz and Krausse 2013; Krausse et al. 2016; Kurz 2010.
8 Augier et al. 2007; Augier et al. 2012; Milcent 2007.
9 Fernández-Götz and Ralston 2017.
10 See discussion in Fernández-Götz 2017.

between the Atlantic and Eastern Europe.[11] Sites such as Levroux, Aulnat and Acy-Romance in France, Basel Gasfabrik in Switzerland, Bad Nauheim and Berching-Pollanten in Germany, Lovosice, Němčice and Prague-Bubeneč in the Czech Republic, Roseldorf in Austria, and Sajópetri in Hungary are located predominantly on economically favourable positions in lowlands. They fulfilled an important economic role, and their size could be considerable, with some centres reaching several dozen or even more than 100 hectares. Although some of them present an enclosure or symbolic demarcation, they do not exhibit any formal fortification.

From a paths-to-complexity perspective, the fact that many open agglomerations started in the La Tène C period or even towards the end of La Tène B has important consequences for our understanding of the processes that led to the development of the La Tène D *oppida*. The Late Iron Age process of centralisation and urbanisation pre-dates the development of the *oppida*,[12] as it was part of broader trends of demographic growth, increase in agricultural and artisanal production, and flourishing trade that can be observed since the third century BCE across large sections of Temperate Europe.[13] Therefore, the roots were primarily endogenous, although in later stages the process was accelerated by external contacts, most notably with Rome.

In this context, the proliferation of fortification works at the end of the second and the beginning of the first centuries BCE, both at newly founded sites and at some pre-existing open settlements, could suggest a direct or indirect link with certain historical events of external pressure. This may have included the real or perceived threat caused by the territorial expansion of Rome and the population movements of the Cimbri and Teutones.[14] The external factors might have contributed, at least in Gaul, to the increase in the building of fortifications, but are not the cause of the already ongoing process of centralisation and urbanisation which had its origins in the third century BCE. Moreover, exterior influences can be understood only in combination with internal trends such as the articulation of political control in a framework of growing socioeconomic complexity.[15] The role played by emulation, control and prestige competition in peer polity interaction deserves consideration. Rather than looking for a monolithic explanation, it is necessary to acknowledge the existence of multiple factors, often interrelated, that led to the rise of the *oppida*. What can

11 Collis et al. 2000; Fichtl 2013; Fichtl et al. 2019; Filet 2017; Salač 2005, 2009a, 2014.
12 Colin 1998; Collis 1995, 2016; Fernández-Götz 2018; Fichtl 2013; Kaenel 2006.
13 Fichtl and Guichard 2016.
14 Guichard 2017; Moret 2018.
15 Brun 2015; Fernández-Götz 2018.

be discarded is the thesis of an 'import' of northern Italian models linked to the supposed reflux of the Boii: neither the classical texts, nor the available archaeological data allows for attributing to them the supposed 'urban experience' that they would subsequently have taken to the other side of the Alps.[16]

2 Defining the *Oppida*: What Is in a Name?

Having reached this point, it is worth taking a closer look at the concept of the *oppidum* itself. In the context of Gaul, the use of the term goes back to Caesar, who used it repeatedly in his writings, although at no time did he offer a precise definition of the term and sometimes applied it to very different situations. In any event, from his account we can deduce that he referred to economic and political centres that occupied the most important positions in the hierarchy of Gallic agglomerations, going as far as using the Latin term *urbs* for places such as *Alesia*, *Gergovia* and *Avaricum*.[17]

Among archaeologists, the use of the term *oppidum* became consolidated with the excavations undertaken in the second half of the nineteenth century at sites such as Boviolles, *Alesia*, *Gergovia* and *Bibracte*.[18] The principal cause of dispute over the different definitions is the minimum area an archaeological site has to have to be included in this category: 10 hectares (Duval), 15 hectares (Fichtl), 20–25/30 hectares (Collis), 30 hectares (Dehn), 50 hectares (Guillaumet), etc.[19] In this paper, I have opted for the approximate figure of 10 hectares, bearing in mind that this is merely for orientational purposes. Given that, as we will see, both the topographical location and the internal functions or organisation of the *oppida* present a wide spectrum of variations, I believe it is preferable to start with a wide-ranging general definition and then to be more specific at the local and regional levels. For Temperate Europe, I propose the following general definition of *oppidum*: 'a fortified site from the end of the Iron Age with a minimum area of 10 hectares'.

16 Kysela 2009.
17 Boos 1989.
18 Fichtl 2012b; Gardes 2017; Lukas 2014.
19 Fichtl 2005a; Gardes 2017.

3 Exploring the *Oppida*: 150 Years of Research

Systematic archaeological research into *oppida* began in the second half of the nineteenth century, coinciding with the initial excavations—still mainly guided by the classical texts—commissioned by the French emperor Napoleon III at sites named in the *Gallic Wars*, such as *Alesia*, *Gergovia* and *Uxellodunum*.[20] The subsequent stage was dominated by the figure of the famous French archaeologist J. Déchelette, who continued the excavations begun by his uncle, J.-G. Bulliot, in *Bibracte*.[21] It was Déchelette who developed the influential notion of the 'civilisation of the *oppida*' to refer to the supposed cultural unity existing north of the Alps at the end of the Iron Age, although other scholars such as P. Reinecke also made important contributions to the concept.[22]

Following a less intense period of research, the study of *oppida* experienced a major boost in the decades following the Second World War. This was particularly the case in Germany, with the beginning of systematic excavations at the *oppidum* of Manching and some overarching contributions from authors such as Dehn, and in the former Czechoslovakia, where large-scale excavations were carried out at archaeological sites such as Závist, Hrazany and Staré Hradisko.[23] For a time, French archaeology remained in the shadow of these developments, although this situation changed radically in 1984, the year in which the archaeological excavations at *Bibracte* were resumed under the patronage of President François Mitterrand. From then on, this archaeological tradition has increasingly focussed on the Late La Tène period, and today it can be considered the most active on the topic.[24] In addition to *Bibracte*, we can cite other large-scale projects such as those undertaken in the Aisne Valley and at the *oppidum* of Corent in Auvergne, to name just some examples. In other countries, too, the past few decades have been particularly fruitful. Among the many existing examples, we could highlight the work carried out at the *oppidum* of Titelberg in Luxembourg,[25] as well as the results of the German Research Foundation's (DFG) 'Romanisation' project in the Middle Rhine-Moselle region, which included excavations at *oppida* such as Martberg and Wallendorf.[26] The advances seen on a European scale since the 1970s are far too numerous to list

20 Fichtl 2012b.
21 Lukas 2014.
22 Reinecke 1930.
23 Sievers 2007; Dehn 1962; Salač 2009b.
24 Fichtl 2005a, 2012a; Haselgrove 2010; Kaenel 2006.
25 Metzler 1995; Metzler et al. 2016.
26 Haffner and Schnurbein 2000; Krausse 2006.

here, so I refer to the excellent summary published by Kaenel for the colloquium *Celtes et Gaulois, l'Archéologie face à l'Histoire*.[27]

There are currently various overview works on *oppida* in Temperate Europe, among them the outstanding and still fundamental book by J. Collis, *Oppida. Earliest towns north of the Alps* and S. Fichtl's monograph *La ville celtique*, the most comprehensive work written to date.[28] In addition to these reference works, there are updated summaries on numerous sites, for example Titelberg, Manching, Heidengraben, Mont Vully and Corent on the continent, and Stanwick in Britain.[29] The two most extensively researched *oppida*, Manching and *Bibracte*, also have their own series of publications (*Die Ausgrabungen in Manching* and *Collection Bibracte*), which have witnessed some important recent additions.[30] In any case, the most important event in recent decades has been the inauguration of the *Centre Archéologique Européen du Mont Beuvray* as a first-class international forum for specialists and students from all over Europe studying the Late Iron Age. An impressive website with information on each of the settlements included within the *oppida* category has also been set up.[31] *Oppida* are, therefore, a topical subject, even though there are still considerable lacunas in our knowledge. The investigation of these sites poses a whole series of specific challenges, including their immense area, which makes the complete excavation of an *oppidum* impossible. In many cases, this has led archaeologists to concentrate on the ramparts, leaving the interior largely unstudied.[32]

4 Assessing the *Oppida*: Unity and Diversity

In addition to their fortifications and large inner areas, most *oppida* share some characteristics such as housing a significant population, serving as places for craft production and exchange, and fulfilling a political and religious role.[33] Common material culture items found at numerous *oppida* include wheel-turned pottery, metalwork on an almost industrial scale, coins, keys, glass beads and bracelets, and Roman imports such as wine amphorae. However, there are

27 Kaenel 2006.
28 Collis 1984; Fichtl 2005a.
29 Titelberg: Metzler 1995; Manching: Sievers 2007; Heidengraben: Ade et al. 2012; Mont Vully: Kaenel et al. 2004; Corent: Poux 2012; Stanwick: Haselgrove 2016.
30 Winger 2015.
31 www.oppida.org.
32 Collis 2010.
33 Collis 1984; Fichtl 2005a; Wells 1984.

exceptions to this general picture, and some *oppida* appear to have been nearly empty spaces with a purely symbolic and/or defensive role. Due to this heterogeneity, various authors have criticised the use of the *oppidum* concept, pointing out that it is not a useful analytical category for differentiating between sites in terms of their size, shape, function and chronology.[34] It is true that by using it we run the risk of homogenising a picture characterised by a diversity of situations, as there are multiple scenarios and trajectories that can vary between different areas and even within the same region. Some examples are:

a. Chronology: While certain *oppida* were occupied for only a very short time, perhaps one or two generations, others have long settlement trajectories that can extend over several centuries. Manching, for example, gradually developed over many generations from a small settlement into an open agglomeration and finally a fortified *oppidum* (Fig. 2.2).[35] Other *oppida*, particularly in Gaul, continued to exist during the Roman period and sometimes even in medieval and later times (e.g. *Vesontio* →Besançon, *Avaricum* →Bourges, *Durocortorum* →Reims).[36]
b. Size: Whereas some *oppida* cover several hundred or even more than a thousand hectares (Kelheim, Heidengraben, etc.), others barely reach the minimum area to be included in this category (Otzenhausen, Hrazany, etc.).
c. Topography: While some sites were situated on the plain (Manching, Villeneuve-Saint-Germain, etc.), many others were placed in elevated locations (*Bibracte*, Donnersberg, Závist and a long etcetera). V. Salač has emphasised the importance of distinguishing between 'lowland' and 'mountain' *oppida*, attributing a certain set of characteristics to each type (cf. below).[37]
d. Urbanism: Some centres such as Manching, *Bibracte*, Corent or Titelberg can be described as 'urban' based on criteria such as evidence of a preconceived plan, housing a population of several thousand inhabitants, bringing together different categories of people and activities, and acting as central places for the communities in the hinterland.[38] Other *oppida* sites, however, appear to have been fortified enclosures with very little or no internal occupation (for example Zarten/*Tarodunum*, Finsterlohr and Mont Vully). In this paper, I follow a context-dependent definition of

34 Boos 1989; Woolf 1993.
35 Sievers 2007; Wendling 2013.
36 Fichtl 2005a.
37 Salač 2009a, 2014.
38 Cf. Smith 2016.

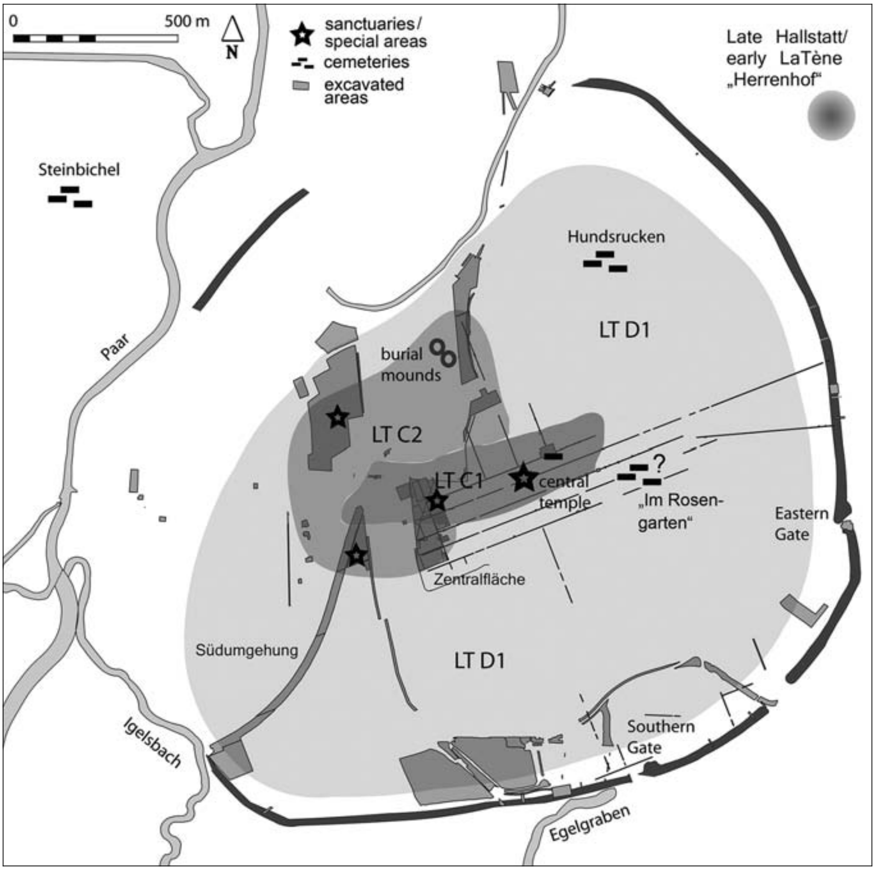

FIGURE 2.2 Manching. Archaeological features and sites within the area enclosed by or adjacent to the rampart of the later *oppidum*. Settlement expansion by period is indicated by different shades of grey.
AFTER WENDLING AND WINGER 2014

'city' which recognises the high levels of variation that often exist between and within different urban traditions: 'A numerically significant aggregation of people permanently living together in a settlement which fulfils central place functions for a wider territory'.[39] 'Central place', in turn, is defined as: 'any kind of place with central functions for a supra-local community'.[40]

39 Fernández-Götz and Krausse 2013: 480.
40 Gerritsen and Roymans 2006: 255.

But keeping this complexity in mind, I do not believe that the solution lies in replacing the term *oppidum*. The answer is not to abandon concepts, but to define their meaning more accurately, to establish nuances for dealing with specific cases and to carry out analyses on different scales that take into account both the similarities and the differences on synchronic and diachronic levels. One of the main challenges in the investigation of the *oppida* is finding the balance between the presentation of a widespread phenomenon and the recognition of the specific particularities of each region/site that make up the whole.[41] What is clear is that the idea of a homogenous '*oppida* civilisation' must be deconstructed, so that we can move on to perceiving a multiplicity of local and regional scenarios.[42]

5 Complex Networks: Open and Fortified Sites

From the reflections offered at the beginning of the paper, it is clear that the *oppida* cannot be understood in isolation, but rather should be studied as part of wider settlement patterns that include rural sites and open agglomerations. To acknowledge the complexity of Late Iron Age agglomerations, Salač has proposed that distinctions be made between the following four categories of sites, of which only the last two were fortified: 1) 'production and distribution centres' (PDC); 2) 'centres of the Němčice-Roseldorf type' (NRC); 3) 'mountain *oppida*'; and 4) 'lowland *oppida*'.[43] This classification acknowledges the importance of open agglomerations, and also emphasises the fact that not all *oppida* were located on high topographical positions. The traditional focus of Iron Age research on fortified sites (hillforts and *oppida*) means that the importance of open sites has long been underestimated, a fact that has begun to change only in the last two decades (Fig. 2.3).[44] Thanks to development-led archaeology, aerial images and geophysical surveys, the corpus of Late Iron Age open agglomerations is constantly expanding, and we should expect new sites to be discovered in the future.

Some open agglomerations were large production and distribution centres which performed economic functions, at the very least, equivalent to those of the most prominent *oppida*. Among the evidence found at unfortified sites are coins, imports originating in distant regions, large-scale metallurgy production

41 Fichtl 2005a.
42 Kaenel 2006; Woolf 1993.
43 Salač 2009a.
44 Barral and Lallemand 2014; Moore and Ponroy 2014; Salač 2009a.

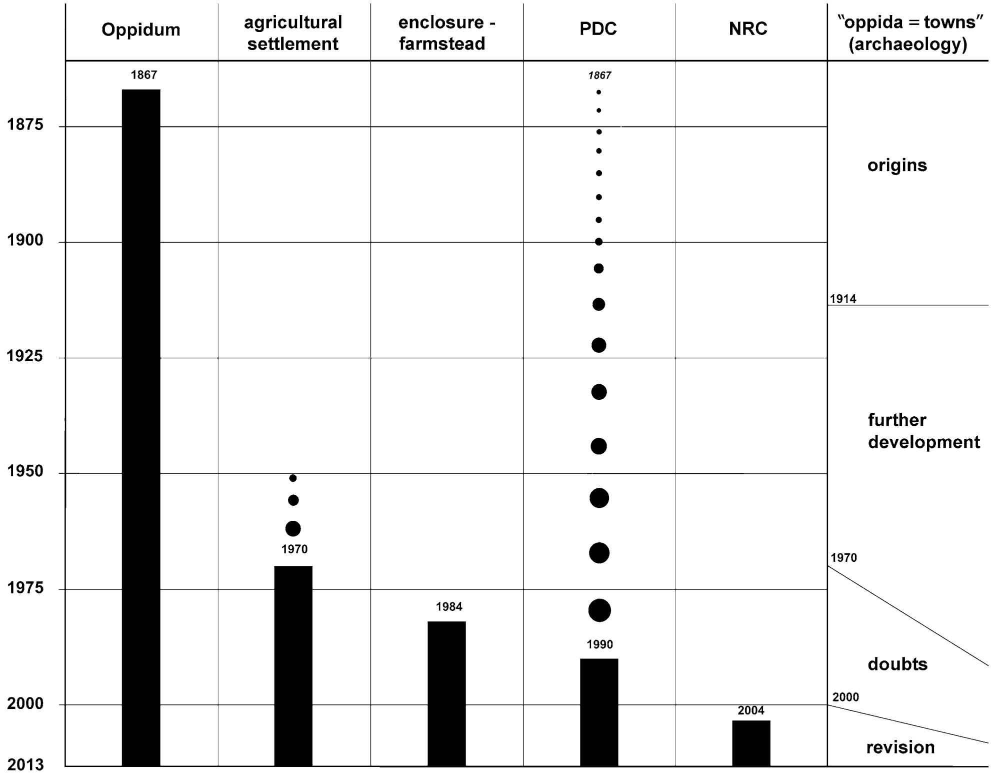

FIGURE 2.3 Advancement in our knowledge of individual types of La Tène settlements in Temperate Europe
AFTER SALAČ 2014

and manufacture of glass objects.[45] Therefore, we can discard the traditional idea that significant industrial and trading activities were exclusively concentrated in the *oppida*, and question the role of walls as proxies for urbanism.[46] In fact, some open agglomerations are closer to a contextual definition of cities than many fortified *oppida*.

Whereas most open agglomerations developed over time as the result of organic growth and with an important bottom-up component,[47] the majority of the continental *oppida* were founded as the result of deliberate political decisions that often involved processes of synoecism directed from the top down

45 Collis et al. 2000; Fichtl 2013; Salač 2005, 2009a and 2014.
46 Moore and Ponroy 2014.
47 Buchsenschutz 2015; Salač and Buchsenschutz 2014.

by members of the social elite.[48] With few exceptions, the *oppida* were deliberate *ex-novo* foundations—although in some cases re-occupying places of earlier significance—rather than the result of a gradual evolution. If we adopt a Foucauldian perspective,[49] and without denying the above-mentioned concern with defense, these fortified settlements represented a new 'technology of power' that enabled a more hierarchical and centralising ideology to be articulated. From this point of view, their appearance also can be seen as a way of reinforcing social cohesion and political control.[50]

What happened to the open agglomerations when the *oppida* were founded in the late second and early first centuries BCE? The responses were manifold, and we can distinguish, at least, four different scenarios:

1. Abandonment of an open agglomeration on the plain in favour of a new settlement on a hill, as exemplified by the transfer observed at Levroux (Fig. 2.4).[51]
2. Continuation of an open agglomeration despite the foundation of a nearby *oppidum*, as illustrated by the open site of Roanne and the *oppidum* of Joeuvre in the territory of the *Segusiavi*.[52]
3. Fortification with a wall of a preexisting open agglomeration, as was the case at Manching.[53]
4. Foundation of an open agglomeration in the immediate vicinity of an already existing *oppidum*, for example Sources de l'Yonne near *Bibracte*, both of which could have formed part of the same enlarged settlement complex.[54]

6 The Paradigm of Monumentality: The Fortifications of the *Oppida*

The frequently immense walls of the *oppida* are probably their most eye-catching feature, among other reasons because, despite the passing of the centuries, they are normally the most visible elements in the landscape. Some of them are several kilometres long; for example, seven kilometres in the case of Manching or the exterior enclosure of *Bibracte* (Fig. 2.5). Their function and

48 Buchsenschutz and Ralston 2012; Gruel and Buchsenschutz 2015.
49 Fernández-Götz 2014a; cf. Foucault 1980.
50 Brun 2015; Rieckhoff 2014.
51 Buchsenschutz et al. 2000.
52 Lavendhomme and Guichard 1997.
53 Eller et al. 2012; Sievers 2007.
54 Moore et al. 2013.

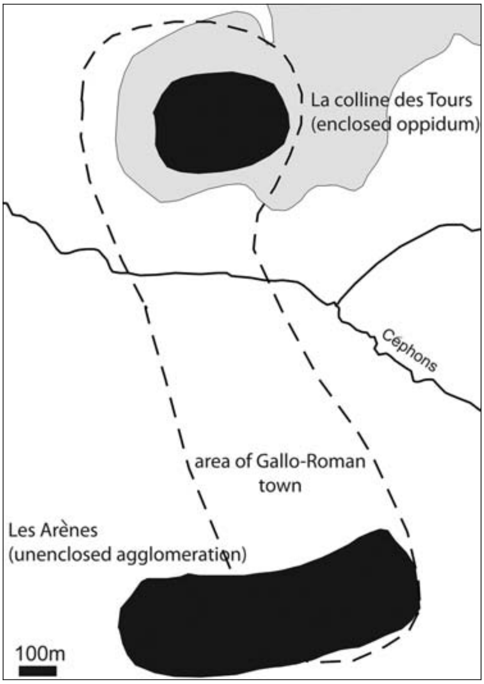

FIGURE 2.4
Model of settlement transfer from open agglomeration to enclosed site at Levroux
AFTER MOORE AND PONROY 2014

meaning have been much discussed, and, as is to be expected, interpretations have been strongly influenced by the sociopolitical and intellectual context.[55] Thus, whereas during a large part of the twentieth century the fortifications were seen mainly from a military point of view as efficient defences, in recent decades their symbolic role has been emphasised,[56] to the point that some authors have questioned whether they had any real defensive purpose or value. However, rather than seeing the defensive and symbolic aspects as mutually exclusive, we should acknowledge that the two perspectives complement each other, as also indicated by ethnographic analogies.[57] Caesar's account is full of references to the defensive and military role played by the *oppida*, which were able to act as operational bases that could accommodate numerous contingents of troops and as fortresses from which to resist a siege.[58]

An argument frequently invoked against the defensive interpretation is that the extremely long walls could not possibly have been defended effectively

55 Collis 2010; Fichtl 2010; Moret 2018.
56 Fichtl 2005b; Krausz 2008; Lock 2011.
57 Armit 2007.
58 Deyber 2013.

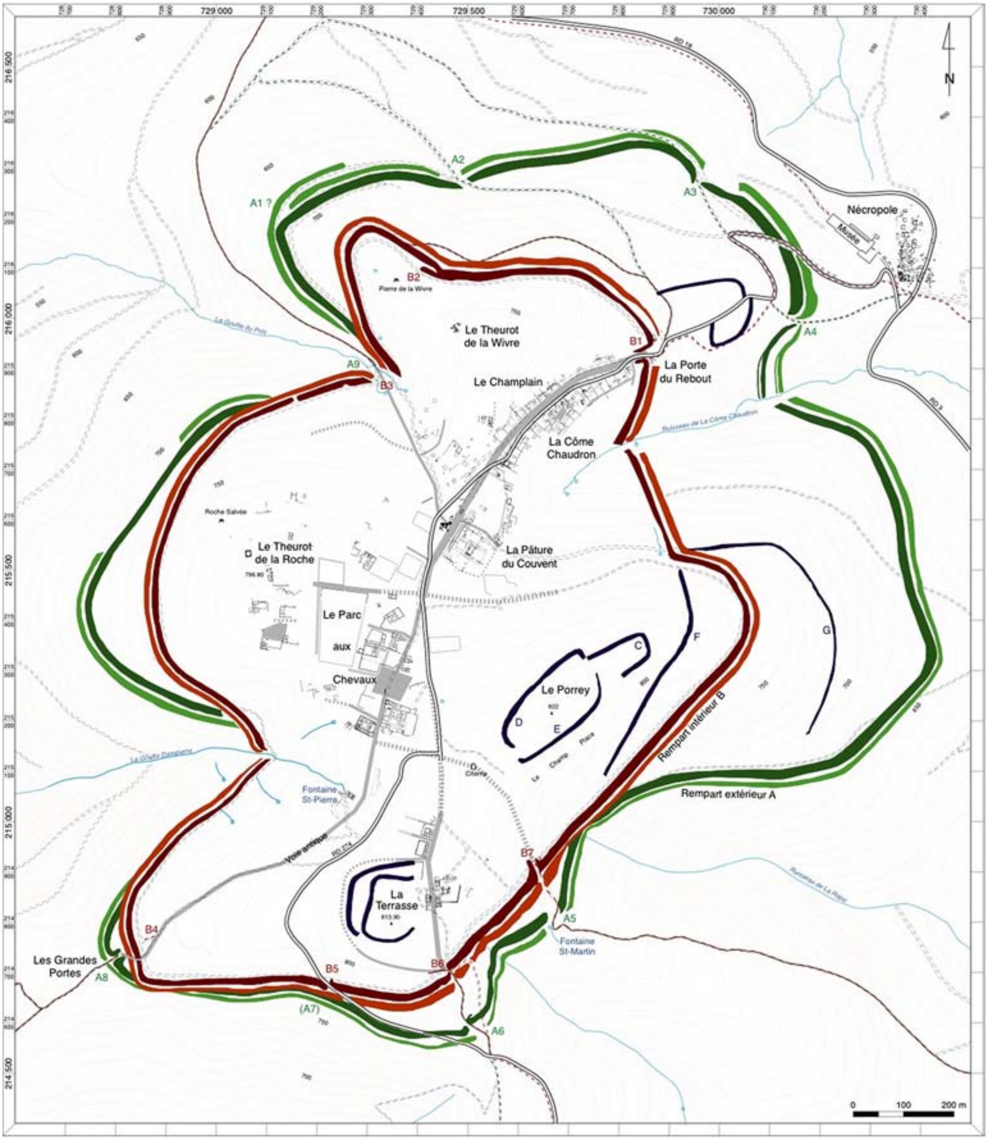

FIGURE 2.5 *Bibracte*-Mont Beuvray: Plan of the *oppidum* with indication of the inner and outer fortification lines
AFTER RIECKHOFF 2014, BASED ON GUICHARD AND PARIS 2013

given the insufficient size of the population. However, the defenders would not have been made up solely of the permanent residents of the *oppidum*, but also of numerous combatants from an extensive surrounding rural area, where the bulk of the polity's population lived.[59] In the same way, we should take into account the existence of coalitions, sometimes of a considerable size, that would have been involved collectively in both offensive and defensive operations.

In any case, the main question should be posed in another way: Why were defences rather than another type of construction the most monumental element of the *oppida*, and of late Central European prehistory in general? Woolf has argued that Iron Age monumentality would have been basically aimed at the exterior, as once visitors had entered an *oppidum*, they saw nothing as imposing as the fortification they had just passed through.[60] This would have marked a contrast between the La Tène and the Roman worlds, as in the latter the opposite was true. In societies marked by a manifest warrior *ethos*, in which the concepts of valour and honour were key to social relations,[61] the construction of fortifications represented the most visible means of manifesting the power of the community and reaffirming its sense of self-identity. In other words, in most cases the main motive behind the construction of the *oppida*'s defensive structures would not have been an immediate threat, but rather to reinforce social cohesion and political control through the realisation of collective tasks of great magnitude, which would also have needed periodic repairs.[62] Nevertheless, the means of expression chosen—walls and entrance gates—do indicate that the warrior ideology formed an integral part of the life of these peoples, and that prestige and power were closely linked to the military realm.

Reflections on the functionality of fortifications are often limited to discussing their utility once built, without considering that the act of organising and carrying out the work may sometimes have been equally important, if not more so.[63] The implementation of these large-scale projects, the most ambitious collective tasks undertaken by Iron Age communities, would have required a major effort of planning and prior preparation, not to mention considerable coordination and an ability to mobilise human and natural resources.[64] In this way, their construction and maintenance constituted an

59 Moret 2018.
60 Woolf 2006.
61 Deyber 2009; Verger 2009.
62 Collis 2010; Rieckhoff 2014.
63 Rieckhoff 2014; Woolf 1993.
64 Collis 2010.

efficient means of reproducing power and dependency relations, while establishing and consolidating feelings of collective identity. The following estimations give us an example of what might have been required: the construction of the *murus gallicus* of Manching needed some 6,900 m^3 of stones just for the façade, several tons of nails (between 2 and 7.5), 90,000 m^3 of earth and stones for the fill between the posts and 100,000 m^3 of earth for the ramp. In terms of labour, some 2,000 people would have been needed for 250 days.[65]

Beyond these considerations, which are undoubtedly fundamental, the case of Manching also shows that we must simultaneously make an effort to understand the more symbolic aspects involved in the construction of the fortifications. Indeed, at that site the wall delineates a circumference with the temple A located in the centre. This temple predates the development of the agglomeration and would have been at its core from the very beginning. The design of the wall in relation to the temple and the perfect triangle described between the cult building and the eastern and southern gates cannot be accidental and probably reflects cosmogonic concepts.[66] Moreover, the large number of iron nails used in the construction of the *murus gallicus* fortifications of numerous *oppida* was a huge material investment, invoking a symbolic practice in line with the tradition of metal deposits in fortifications.[67]

In addition to the material limits set by the *oppida*'s defences, we can also recognise immaterial limits, perhaps endowed with notions similar to those of the Roman *pomerium*.[68] The discovery of burials, human or animal bones and depositions of diverse objects—iron tools, coins, weapons, etc.—inside or close to the fortifications confirms that rituals were carried out there, indicating that walls, ditches and gates had a legal, political and sacred significance similar to that seen in the Mediterranean areas.[69] Finally, some references from written sources and etymology, as well as the astronomical orientation of certain elements within the *oppida*, suggest the existence of foundation myths and a heroic ideology manifested, for example, at sites such as *Alesia* or *Lugdunum*.[70]

65 Sievers 2007.
66 Eller et al. 2012.
67 Nicolai and Buchsenschutz 2009.
68 Fichtl 2005b.
69 Nicolai 2014.
70 Almagro-Gorbea 2016; García Quintela and González-García 2014.

7 Size and Population: The *Oppida* as Examples of Low-Density Urbanism

Together with their impressive fortifications, the main characteristic of the *oppida* is their large size, covering several dozens or hundreds of hectares, with the 1,600 hectares of the Heidengraben as the most extreme continental example.[71] Due to the limitations that this imposes on excavations, we have only a very limited knowledge of their internal occupation. Even in the case of Manching, the most-extensively researched *oppidum*, less than 10 % of its inner area has been excavated.[72] Although geophysical surveys and airborne techniques such as LIDAR are helping to overcome this shortcoming, it remains very difficult to establish how many people lived permanently within the *oppida*. Demographic estimates fluctuate between 1,000 and 20,000 inhabitants. Realistic figures of 5,000–10,000 inhabitants have been proposed for both Manching and *Bibracte*, which would result in a population density of 13–26 inhabitants per hectare in the case of Manching (380 hectares) and 37–74 for the second fortification phase of *Bibracte* (135 hectares). Meanwhile, a population density of c. 40–50 people per hectare has been proposed for Conde-sur-Suippe, Villeneuve-St-Germain and Silchester, and c. 18 per hectare for Ulaca.[73]

What seems clear is that even those sites with a significant internal occupation (e.g. Manching, *Bibracte*, Corent, Titelberg, Martberg) present large free areas inside the fortified space. The rather low-density population figures and the existence of open spaces and often agricultural fields have been used by some authors as an argument to deny the urban character of the *oppida*. However, this would be misleading, since throughout history many urban sites all around the world have been characterised by low-density occupation of often fewer than 50 people per hectare. R. Fletcher has elaborated on this model of 'low-density' urbanism, which forms an alternative to Childe's notion of concentrated, densely occupied urban sites.[74] Famous examples of low-density urbanism are Angkor, Cahokia, Great Zimbabwe and Co Loa, but a significant number of Late Prehistoric European sites can also be added to the list, including the fourth millennium BCE Trypillia mega-sites from Ukraine.[75] As indicated by Fletcher himself, the Late Iron Age *oppida* fit well into the notion of

71 Ade et al. 2012.
72 Sievers 2007; Winger 2015.
73 Moore 2017a.
74 Fletcher 2009; 2012; cf. Childe 1950.
75 Chapman and Gaydarska 2016.

low-density urbanism, an idea that has been recently developed by T. Moore.[76] In this sense, the 'empty spaces' might have served a variety of economic and social purposes, from areas for agriculture to spaces for political assemblies and places of refuge in case of danger.[77]

The recurrent existence of large open areas suggests that these spaces were actually one of the principal elements of the *oppida*, playing a fundamental role in the negotiation of control over people and resources. M.G. Smith's term 'rurban' encapsulates the idea of the domination of many Iron Age agglomerations by unbuilt space, often more similar to farm landscapes than to our traditional notions of urban quarters.[78] In fact, in many *oppida* the basic settlement units were enclosed farmsteads that resemble rural settlement types. These groups of farms with their outbuildings indicate the transfer of rural settlement patterns to a more confined area, in other words a kind of 'translocated landscape' with clustered extended households that could occasionally also perform artisanal and commercial functions. This phenomenon suggests the nucleation of part of the rural population and a concentration of activities that were previously dispersed more widely across the landscape.[79]

But the *oppida* were more than a simple collection of farms; their population would have included non-producers (e.g., full-time specialists, elite members, druids), and we often know about the existence of different functional zones and neighborhoods, such as in Manching, Corent and Las Cogotas.[80] More important than the number of people that lived permanently within the *oppida* was the role of these sites as central places and objects of identification for the populations of a wide rural environment. In a world where the immense majority of the population continued to live dispersed in the countryside, the *oppida* served as focal points of reference that were periodically visited by inhabitants of the rural hinterland on the occasion of markets, political celebrations and religious festivals.

76 Moore 2017a; 2017b.

77 Fernández-Götz 2018.

78 Smith 1972.

79 Danielisová 2014; Moore 2017b.

80 Manching: Sievers 2007; Corent: Poux 2012; Las Cogotas: Ruiz-Zapatero and Álvarez-Sanchís 1995.

8 Politics and Religion at the *Oppida*

Archaeological research is uncovering a growing number of sanctuaries and public spaces or 'plazas' within the *oppida*, and even buildings which could have served for political meetings.[81] One example is the presumed assembly building of the Arvernian senate recently discovered at the public square of Corent in close proximity to the central sanctuary and the market place (Fig. 2.6).[82]

In the case of the *oppidum* of Titelberg, a public space of 10 hectares was separated from the rest of the *oppidum* by a mudbrick wall and a ditch containing traces of ritual activities.[83] Evidence for political decision-making within the public space is provided by the presence of voting installations from the first half of the first century BCE, whereas the enormous quantity of animal bones suggests the existence of large-scale communal feasting.[84] The inner chronology of Titelberg shows that the sacred space for public events was defined around the same time as the *murus gallicus* fortification, followed by the development of significant settlement activity, artisanal production, and trade. A monumental building, developed in several stages at the highest point of the site, was finally transformed into an impressive Gallo-Roman temple in the early centuries CE.

The discovery of public places and sanctuaries at *oppida* such as Manching, Titelberg, Martberg, *Bibracte* and Corent sheds light on the political and religious life of Late Iron Age communities. These public spaces were fundamental arenas for interaction and collective negotiation. Like the enormous quantity of animal bones found at sites such as Titelberg, the large number of wine amphorae documented at *Bibracte* and Corent provides evidence for communal festivals and banquets, probably linked to political assemblies, religious celebrations, and fairs.[85] In this sense, the public gatherings and celebrations held at the *oppida* must have been key elements in the construction of supra-local identities.[86] Written sources, particularly Caesar, describe the existence of political institutions such as public assemblies and senates among Temperate European societies, and it seems that many *oppida* acted as locations for those

81 Fichtl 2012c and 2016; Fernández-Götz 2014a; Metzler et al. 2006.
82 Poux 2012; Poux and Demierre 2016.
83 Metzler 2006; Metzler et al. 2016.
84 Méniel 2008.
85 Poux 2004.
86 Fernández-Götz and Roymans 2015; Gerritsen and Roymans 2006.

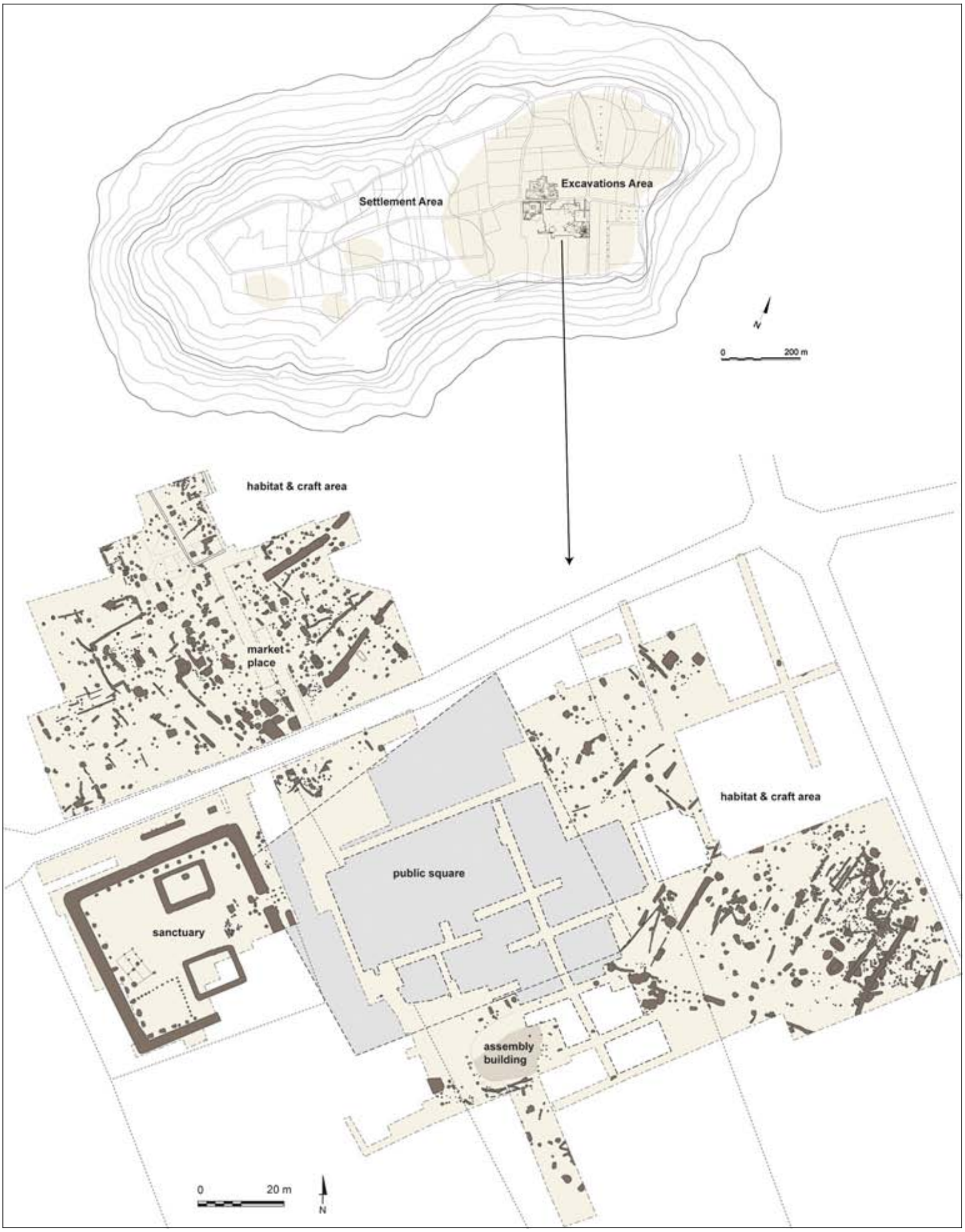

FIGURE 2.6 Corent: excavation of the main public structures in the centre of the *oppidum*, with public square, sanctuary, assembly building and market place
AFTER POUX 2014

political bodies.[87] Several passages in the *Gallic Wars* (e.g. 7.55; 7.33; 7.63) refer to large assemblies and council meetings taking place within the *oppida*. The fact that Caesar's military strategy was often aimed at obtaining the submission of a whole tribal polity by conquering a major *oppidum* also underlines the role of these settlements as political centres.

The combination of written and archaeological sources therefore suggests that one of the primary, if not the most important, roles of the *oppida* would have been to serve as central places for the tribal and sub-tribal polities of the Late Iron Age, representing focal points of politico-religious aggregation and negotiation.[88] M.E. Smith has recently proposed that most premodern cities were centres in which political and religious roles were more important than economic functions. The *oppida* seem to fit well within this general model.[89]

Going a step further, many Temperate European *oppida* might have had their origin in spaces for ritual and political gatherings.[90] There are an increasing number of examples of *oppida* where it has been proven that a place for cult activities and assemblies preceded the concentration of a significant number of people or even the fortification of the area. This phenomenon is particularly evident at Manching. At the centre of this *oppidum* was temple A, the first phase of which dates back to the end of the fourth century BCE.[91] Nearby was a paved space covering an area of 50 × 80 m that may have been used as a meeting place, and several votive deposits of materials dating from between the fourth and second centuries BCE have been found. The existence of a sanctuary pre-dating the development of an *oppidum* in the same location is also clearly visible at Gournay-sur-Aronde: while the famous sanctuary's origin lay in the fourth/third century BCE, the *oppidum* itself did not develop until well into the first century BCE.[92] In the case of Moulay, the *oppidum* was preceded by a sanctuary from the third century BCE.[93] At the *oppidum* of Corent the excavations indicate that the sanctuary was founded before the settlement developed,[94] whereas at *Bibracte* isotopic and dendrochronological dating could suggest that the public space known as 'La Terrasse', measuring 110 × 92 m and situated near a Gallo-Roman temple could have been established in the third century

87 Fernández-Götz 2014b.
88 Collis 2000; Fichtl 2012d; Fernández-Götz 2014a.
89 Smith 2016.
90 Fernández-Götz 2014a and 2014b; Fichtl et al. 2000; Metzler et al. 2006.
91 Sievers 2007; Wendling 2013.
92 Brunaux et al. 1985.
93 Fichtl et al. 2016.
94 Poux 2012; Poux and Demierre 2016.

BCE.[95] This phenomenon is not restricted to Temperate Europe, with a similar situation also seen in Mediterranean Gaul at Iron Age sites such as Entremont or *Glanum*, where the sanctuaries originated earlier than the *oppida*.[96]

9 The Demise of the *Oppida*

In most areas of Temperate Europe the demise of the *oppida* is related to the Roman conquest, which took place between the second and the late first centuries BCE in central-northern Iberia, from 58 to 51 BCE in Gaul, and from CE 43 in Britain. This general explanatory framework does not apply, however, to most regions east of the Rhine; the decline of the large *oppida* of southern Germany took place several decades before the Roman conquest, so that earlier interpretations that associated the end of Manching with the Alpine campaign of Drusus and Tiberius are now discarded. The existence of a population hiatus has been proposed for southern Germany, and although this may not have been a complete depopulation, the Roman urban settlement patterns show little to no relationship with the previous Late Iron Age occupations.[97] In these regions, as well as in central Germany and the Czech Republic, the abandonment of the *oppida* in the course of the first century BCE could have been at least partly related to the arrival of new populations in the context of the historically documented migrations of 'Germanic' groups.[98]

Be that as it may, in most regions incorporated into the Roman Empire the military conquest did not automatically cause the demise of the *oppida*.[99] Although there are some examples of violent destruction of sites such as Monte Bernorio in northern Spain,[100] the majority of the *oppida* were not abandoned during or immediately after the Roman conquest. In fact, many Gallic *oppida* experienced a period of flourishing in the decades between 60 and 20 BCE.

In the case of Titelberg, research since 2003 has focussed on a sector of the western part of the *oppidum* surrounded by a palisade, where a complex plan composed of various phases has been documented. The numerous items of Roman military equipment collected, the abundant presence of objects such as Italic and Hispanic amphorae, Campanian ware and the first forms of Italic

95 Fleischer and Rieckhoff 2002.
96 Garcia 2006.
97 Rieckhoff 1995.
98 Salač and Bemmann 2009; Wigg 1996.
99 Colin 1998; Fichtl 2005a; Paunier 2006.
100 Fernández-Götz et al. 2018.

sigillata, as well as constructions incorporating mural paintings and *opus spicatum* floors, could suggest the presence of Mediterranean merchants dating back to the period before the Gallic Wars, and the subsequent arrival of a Roman military unit in the third quarter of the first century BCE.[101] At *Bibracte* we observe a direct Roman architectural influence after the conquest, as exemplified by some major aristocratic residential structures and a *basilica* following Roman prototypes.[102] But both Titelberg and *Bibracte*, probable capitals of the tribal polities of the Treveri and the Aedui before and after the Roman conquest, were finally replaced by new foundations on the plain in Augustan times: *Augusta Treverorum* and *Augustodunum*. This chronology fits well within a pattern observed in other parts of Gaul, where the major break took place not at the time of the Caesarian conquest, but during the reign of Augustus. Between the last two decades of the 1st century BCE and the beginning of the 1st century CE, numerous *oppida* were abandoned or experienced significant decline. However, there are also some examples of long-term continuity of *oppida* that successfully developed and prospered during Roman times and even into later periods (e.g., Besançon, Bourges).

In general terms, it is possible to differentiate between three different outcomes for the *oppida* following the Roman conquest:[103]

1. Transition from an *oppidum* to a significant Roman city on the same location, exercising an important administrative role, for example as capital of a *civitas* (Langres, Metz, Besançon, Paris, Bourges, etc.).
2. The conversion of an *oppidum* into a secondary agglomeration of variable size, but of lesser importance than the pre-Roman settlement.
3. The abandonment of the *oppidum* in favour of a Roman city normally situated on the plain, as occurred in the archetypal case of the replacement of *Bibracte* by *Augustodunum* in central France or the move from Ulaca to Ávila in central Spain.

The decline of numerous *oppida* can be attributed in part to topographic and economic factors, especially in the case of the 'mountain *oppida*'. Although from a macro-perspective many of these *oppida* were located on the major trading routes, on a micro-regional scale they did not occupy the best possible sites from a strictly economic point of view. In any case, their hilltop locations did not help them to adapt to the new order, and it is not by chance that almost all the new Roman establishments were on the plains, in positions better suited

101 Metzler 2008; Metzler and Gaeng 2009.
102 Rieckhoff et al. 2009; Paunier and Luginbühl 2004; Szabó et al. 2007.
103 Fichtl 2005a.

to the logic of trade and production.[104] This circumstance was further aggravated by the restructuring of the roads under Augustus and Agrippa, which marginalised numerous *oppida*.

In addition to this undoubtedly very important factor, we also have to take into account a tendency to promote the establishment of new urban sites free from the inherent symbolism of the ancient Late La Tène power centres. This would have been one way of reinforcing the new socio-cultural order and of undermining possible attempts at resistance. Moreover, Rome brought an end to the intra- and inter-ethnic wars. This 'internal demilitarisation' made the old monumental fortifications obsolete, from a practical as well as a symbolic point of view.

As an echo of their previous importance, the religious symbolism of the hilltop sites meant that many 'mountain *oppida*' continued to have temples of greater or lesser significance during the first centuries CE despite the decline or even abandonment of their settlements. The Treveran territory is a particularly well-documented example of this phenomenon, with cases such as Titelberg, Martberg and Wallendorf.[105] Some ancient *oppida* locations such as *Bibracte* continued to be frequented in medieval, modern and even contemporary times for pilgrimages or fairs.[106] Nevertheless, their former role as nerve centres of political decision-taking had been lost forever.

Acknowledgements

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CHAPTER 3

The Size Distribution of Self-governing Cities in the North-Western Provinces: Trends and Anomalies

Frida Pellegrino

1 Introduction

This paper is a study of the size of the self-governing cities of the north-western provinces (more specifically, Gallia Narbonensis, the Western Alps—i.e. the provinces of Alpes Graiae, Alpes Cottiae, and Alpes Maritimae—the Three Gauls, Germania Inferior and Britannia).[1] As cities change constantly in response to socio-economic processes, it has been decided to focus attention on a specific period of time, that is the mid-late second century CE. One reason city size is a subject of interest is because it can give important information about the importance of a city, the scale of its population, the services it can offer, the people it attracts, and the roles it plays on a regional and/or inter-regional level. After a review of the challenges and limitations such a study entails, individual provincial trends and the overall pattern will be analysed and discussed. Finally, the correlation between the sizes of self-governing cities and the extent of their administrative territories will be explored. The aim of this exercise is to discover how many cities could potentially have been sustained by their own territories and how many would have had to rely on a permanent flow of external resources to be able feed their urban populations and sustain their economies.

2 The Evaluation of City Size for Ancient Cities: Criteria

Our knowledge of the size of ancient cities is often hindered by the fact that ancient cities are hidden below modern ones and hence our understanding of them depends on how well and for how long they have been investigated. Luckily, in recent times the peripheries of modern cities have often been the

1 The many 'secondary agglomerations' (known as 'small towns' in Anglo-Saxon scholarship) will not be taken into account here.

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focus of urban development and, therefore, are likely to have been the target of commercial archaeology. Nonetheless, estimate of ancient city sizes can never be entirely accurate. However, compared to other areas in the Roman Empire (e.g. Africa, Asia Minor), the north-western provinces have been very well researched and therefore this sort of study can be pertinent.

In fact, it is possible to obtain an approximate estimate of the urban area for most self-governing cities in the north-western provinces (Appendix A). Ideally, our aim would be to determine the built-up surface of a city, that is, the extent of the area that was actually occupied by public and private buildings. Unfortunately, this is not always possible, and at times the best approximation that can be found is a measurement of its walled area. Only in a very small minority of cases do we lack *any* substantial material on which to base our measurements. A few cities are still too little understood (e.g. Cassel in Belgica or Bayeux and Carentan in Lugdunensis). Others have not yet been precisely located (e.g. *Vintium* in the Alpes Maritimae). In Britain especially we are still forced to rely too heavily on the ditches and earthworks that surrounded the cities. These features are often only roughly dated.

The built-up surface of cities can be estimated using a combination of three main parameters: the extension of the street-grid, the locations of the necropoleis and the extent of its circuit walls. In the case of each individual city, all of these parameters have to be closely scrutinised and critically assessed because all three of them can be beset by difficulties.

2.1 *The Walled Area*

The extent of the street grid is a problematic measure since it does not take urban density into account.[2] As we have just mentioned, in Britain the walled area has often been made a substitute for the built-up area if the latter cannot be fully assessed.[3] The rub is that this figure is rarely a good approximation of the surface actually occupied, because it fails to take the possible existence of empty areas into consideration. Several walled cities that have been excavated or surveyed have been discovered to have been only partially occupied. This is the case, for example, of Caistor-by-Norwich near Norwich, Aix-en-Provence and Fréjus. The walls at Caistor enclosed 36 ha, but this is not a good approxima-

2 The difficulty of estimating the size of a city's built-up area based on an irregular street grids is illustrated by the case of Le Mans. While Bedon 2001: 187 thinks this city occupied an area of 30–40 ha, Monteil 2012: 38 provides a much higher estimate of 60–70 ha.

3 This is not the case in Gaul, in which only a few cities (those that enjoyed a high municipal status) were walled during the High Empire.

tion of the built-up area, which probably extended over some 25 ha.[4] The circuit wall of *Aquae Sextiae* was built of stone under either Augustus or Tiberius. Although this wall was 3,380 m long and enclosed over 60 ha, at its peak only 25 ha of the city were actually built up.[5] Likewise, at Fréjus, it would seem that the entire area inside the walls (c. 40 ha) was not fully occupied: in particular the south-east corner seems to have been uninhabited and was taken up by gardens and open spaces instead. It might also have taken at least 30–40 years for the northern section of this town to have become fully occupied.[6]

2.2 *The Street-Grid*

The implantation of the street grid is often a good starting point for the evaluation of city size. However, this parameter, too, has to be assessed critically, because it is not always a true reflection of the reality of the built-up area. The street-grid often dates to a very early stage in the foundation of the city and was of the result of a political decision rather than of an actual demographic process. For example, several cities in Brittany (western Lugdunensis) are known—thanks to aerial photography—to have had a clearly planned layout. However, this evidence alone is a poor guide to the extent of their actual occupation. At Corseul, the street-grid had obviously been planned in advance by the authorities but it was never completely occupied. As is clearly visible on the site 'Sale des Fêtes', the ditches that were meant to run alongside a *cardo* had already been dug around 10–20 CE, well before the actual work on the street began (during the reign of Nero) and the first houses would be built straight afterwards.[7] A similar policy can be envisaged on the site of Monterfil II, in which the area that would be assigned for the future *decumanus* was delimited by two ditches before the area was inhabited.[8] In the city of Rennes, only the area around the forum appears to have been densely occupied; the rest of the urban fabric was relatively dispersed and covered with large fields and gardens.[9] At Vieux, the north-east corner of the street-grid was taken up by limestone quarries and—with the exception of only a few buildings (that also had a quarry in their gardens)—the area was largely empty and could be regarded as non-urban.[10]

4 Bowden and Bescoby 2008.
5 Esmonde-Cleary 2003: 75.
6 Goudineau 1980.
7 Fichet de Clairefontaine and Le Potier 1987: 89–91.
8 Kérébel 2001: 26–28.
9 Pouille 2008.
10 Vipard 2002.

2.3 *The Necropoleis*

Another element in the landscape that is useful in calculating the extent of a city is the position of its extra-urban cemeteries. However, this parameter can also pose problems. For example, at Sens the urban space delimited by the necropolis seems to extend over 200 ha. The habitation in this area was, however, unevenly distributed. On the basis of the distribution of mosaics represented in Perrugot's map, the size of the built-up area may be estimated as around 90 ha. However, difficulties in distinguishing between urban *domus* and extra-urban villas could invalidate this figure, and it is possible that the effective built-up area of Sens was actually slightly smaller, c. 60–70 ha.[11]

2.4 *The Unbuilt Space*

When trying to establish the extent of the built-up area of a city, all the three criteria discussed above (walled area, street-grid, and location of the necropolis) should be considered together whenever possible. Nevertheless, since the areas enclosed by the perimeters of some Roman cities included substantial spaces that were void of public or domestic buildings, knowing the size of a city is not always enough. One common assumption is that peripheral areas were less densely built-up than the urban cores. Although this argument still stands, the nuances are numerous and impossible to account for. For example, the excavations at the former County Hospital site in Dorchester revealed that large spaces in the south-western corner of this city remained unoccupied throughout Roman times.[12] Recent studies have also proved the existence of empty spaces, fields or gardens, in more central quarters, suggesting that keeping animals and small-scale farming were activities that could be pursued even in officially acknowledged cities.[13] A central area of the city of Exeter is known to have been left empty throughout the entire Roman period and was presumably given over to gardens, farmland or pasture. Assessing the juridical status of such land, which might have been owned collectively or have belonged to a family unit, is a tricky business.

11 Perrugot 1996.

12 Holbrook 2015.

13 Farming is evidenced by the presence of fodder (Ingrem 2006: 179–180; 2011: 162–164; Maltby 2010: 287–329). In Leicester (Vine Street) and Silchester (Insula IX), biological remains indicate the presence of domestic animals having been bred within the towns (Morris et al. 2011: 29; Robinson et al. 2006; Robinson 2011).

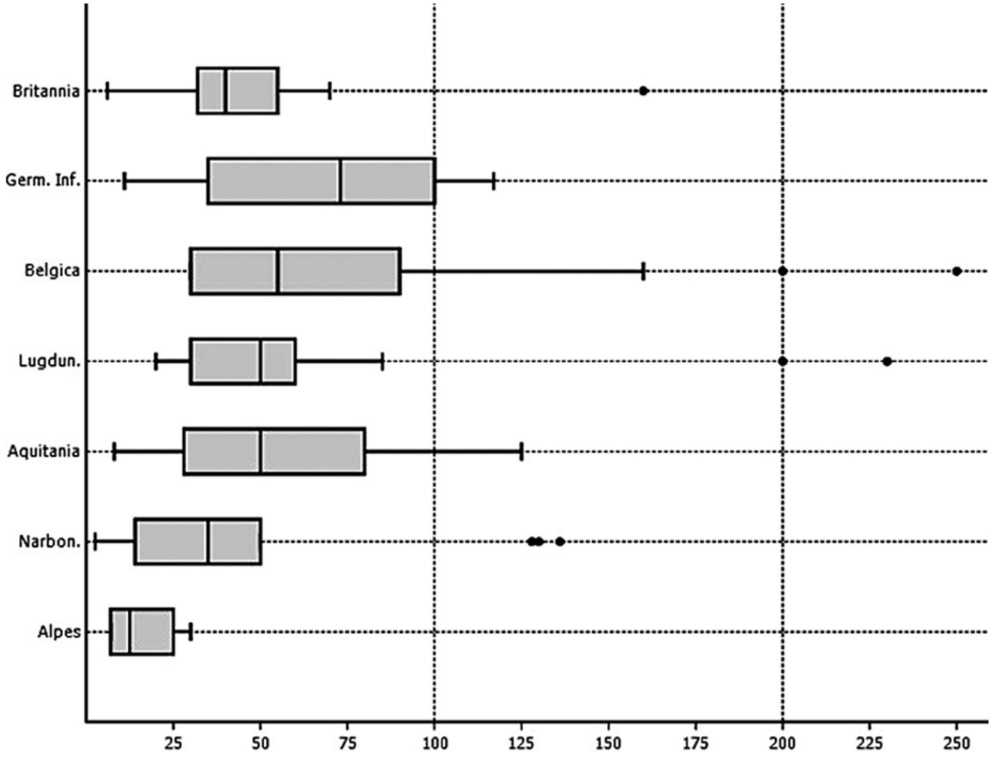

FIGURE 3.1 Box-plot showing the sizes (in hectares, on the horizontal axis) of self-governing cities in different provinces. The central segment represents 50 % of the size estimates available for each province and the two whiskers 25 % each. Dots outside the box-plot are "outliers" representing cities whose sizes equalled or exceeded 1.5 times the interquartile range.

3 Sizes of Self-governing Cities: Provincial Patterns

In view of the difficulties posed by any attempt to put a figure on the size of the built-up areas of the cities of the north-western provinces, it is obvious that the figures presented in Appendix A should be regarded as broad orders of magnitude rather than as fairly precise estimates.[14] In Figure 3.1 we see a series of box plots representing size ranges for self-governing cities in the different provinces in the north-western Empire.

14 The figures given here refer only to the actual urban area. Military fortresses are excluded, even when they were adjacent to cities (for example, York).

At this high level of abstraction a few significant patterns can be observed. For example, the self-governing cities in Narbonensis and in the Alpine provinces were—on average—quite small (max. 30 ha) compared to those of other provinces. Those in Britain and Lugdunensis were quite similar in that their range—that is, the difference between the largest and smallest values—was relatively small. However, in both provinces a few outliers stand out in an otherwise quite homogenous distribution (namely London, Lyon and Autun). Belgica and Aquitania, on the other hand, had a much higher proportion of very large cities. Now let us take a brief look at the individual provinces.

3.1 *Britannia*

In Britain, very small cities (< 20 ha) were to be found in the north and east of the province (for example, Moridunum, Petuaria, Venta Silurum), in which the influence of the army was felt most strongly and in which, even during the Iron Age, the landscape had never been marked by any large central places. In the south and east of the province, by contrast, most self-governing cities were medium-sized (20–60 ha), the exceptions being the large settlements of St Albans and Cirencester (c. 70 ha). Only London was exceptionally large, covering an area of up to 160 ha.

3.2 *Lugdunensis*

Many cities in Lugdunensis, especially those in Normandy, were smaller than 30 ha (Vieux, Evreux, Lisieux, Le Mans, Avranches). Medium-sized towns (50–60 ha) could be found in Brittany (for example, Rennes, Corseul, Carhaix). The areas enclosed by the perimeters of some of these towns was quite large, but as was the case with some of the self-governing cities of Britain, there are reasons to think that they might have been sparsely occupied (cf. above). For example, the street grid of Carhaix took up between 90 and 130 ha, but this figure is undoubtedly an over-estimation of the actual built-up area. Many areas within the city, even when transected by the planned street-grid, were probably uninhabited and were possibly occupied by fields and gardens. The built-up area is likely to have measured approximately 60 ha.[15]

15 Monteil 2012: 31, Galliou 1991 and 2005. Le Cloirec indicates that, given the modern checker-board plan of the city, plus the location of the *castellum divisorium* and the necropolis, the extent of the city could have reached 130 ha (Le Cloirec 2004: 381). Galliou thinks the city might have been even larger, up to 150 ha, but he admits that many areas within the city were probably uninhabited (fields and gardens). Although Monteil also believes that the street-grid extended between 90 ha and 130 ha, he does assert that this figure is undoubtedly an overestimation (Monteil 2012: 31). Attempting an approximation, we can imagine that the built-up area covered only two-thirds of the city.

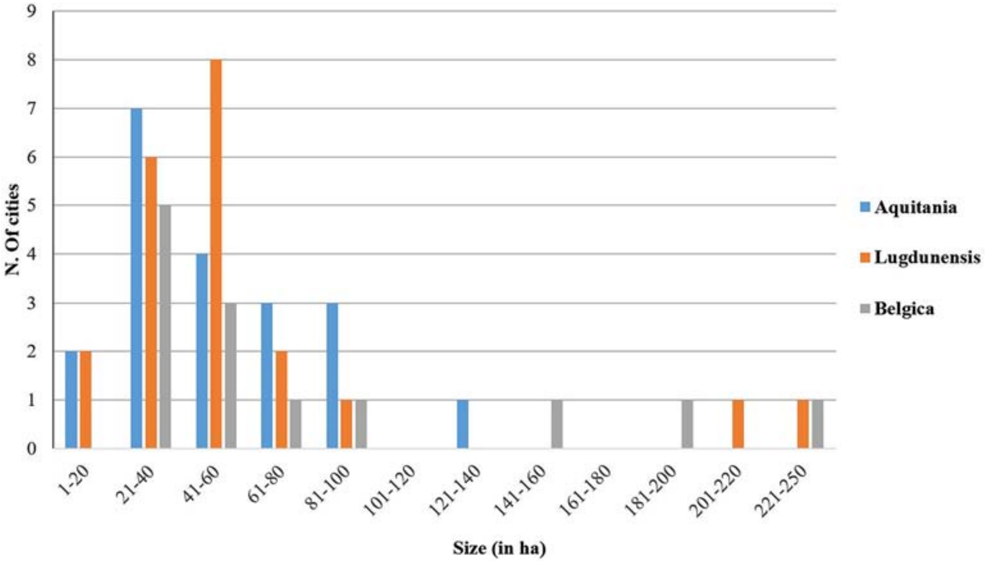

FIGURE 3.2 Estimated sizes of the self-governing cities of the Three Gauls

Another example is Rennes.[16] As we mentioned above, the street-grid of this city in the High Empire extended over around 80 ha. However, not all of it was densely inhabited, with perhaps only 45 ha being actually occupied. Troyes measured at most 80 ha, but again this figure refers more to the size of the area enclosed by the perimeter of the city than to its built-up area. The area south of the Place de Préau was sparsely inhabited given that it was probably marshy and subject to flooding. Similarly, in Vannes the regular plan extends over c. 50 ha. However, not all of it was densely inhabited (Ferdière has suggested that the built-area covered around 40 ha).[17] In Vieux, only 25 ha of the city were certainly occupied. Tours measured 50 ha, but its western quarters seem to have been abandoned before the mid-second century CE. Cities towards the east, such as Chartres and Rouen, were larger and covered at least 80 ha. Nevertheless, an unusually high flow of resources was concentrated in only two cities, a circumstance that allowed them to grow exceptionally large: Lyons and Autun.

16 At the time of the High Empire the street-grid of this city covered around 80 ha. However, not all of this area was densely inhabited. An approximation of its built-up area might be around two-thirds of the total, that is around 50 ha. This estimate is based on the distribution of published finds. It should, however, be noted that the archaeological record for Rennes is very patchy due to the small number of operations undertaken.

17 Ferdière 2011, Tab 2: 36.

In a nutshell, the cities of Lugdunensis (especially those in Brittany) and those in Britannia seem to have been characterised by a relatively modest size and a low level of occupation. Part of the urban populations of these provinces might have been involved in primary activities, such as food production.[18] However, even if this was the case, the archaeological remains of public buildings, wealthy *domus* and workshops used by urban craftsmen leave no doubt that the cities of these regions performed a variety of functions, such as administration, politics, defence, religion, commerce and specialised production. The monumental buildings of these cities were symbols of *urbanitas*, the image of a 'civilised world', in eternal opposition to the *ferocitas*, the supposed character of rural space, as well being the key to reading the claims and aspirations of the political and social elites dominating these agglomerations.[19]

3.3 *The Western Alps*

In the Alps, self-governing cities were relatively small, measuring between c. 20 and 30 ha.[20] Some of them, such as *Glanate* (Entrevaux) and *Brigomagus* (Briançonnet), were much smaller (c. 7–10 ha). Those settlements which are known to have been self-governing cities under the High Empire appear to have been equipped with all the typical elements of Roman urbanism (amphitheatres, *fora*, aqueducts). Their modest size should not come as a surprise since this specificity was certainly governed by geographical factors, including the size and productive capcity of their territories.[21] As argued by Leveau and Palet, in mountainous regions—because of the constraints imposed by the landscape, with their high peaks and the linearity of their valleys—each settlement is a "ville naturelle, avec les montagnes en lieu et place d' un mur d' enceinte, et des cols en guise de porte", and reaches a optimum size more or less equivalent to that achieved by other settlements.[22]

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18 De Vries 1984.

19 In Britannia, evidence of wealthy *domus* and *tabernae* have been found at Silchester, St Albans, Colchester, and Wroxeter. At Corseul, in Lugdunensis, *insulae* with porticoed *tabernae* and *domus* have been discovered. Similarly at Vieux and Lillebonne large, opulent *domus* with refined sculptures and mosaics indicate the presence in town of affluent elites.

20 Briançon could have reached 30 hectares if the area between the centre and the amphitheatre was all built up. Martigny measured between 20 and 25 ha. According to Segard (2009), it might have been slightly larger, between 30–35 ha, but we do not have any definitive evidence yet. Susa measured c. 30 ha. Most details about the supposedly self-governing cities of *Eburodunum*, *Rigomagus*, Senez, Valdeblore and *Vintium* are still obscure and have not always been precisely located. Therefore no estimates can be provided.

21 Leveau and Rémy 2008.

22 Racine 1999: 112. This expression was used by Karl W. Deutsch when talking about the mountain cantons in Switzerland.

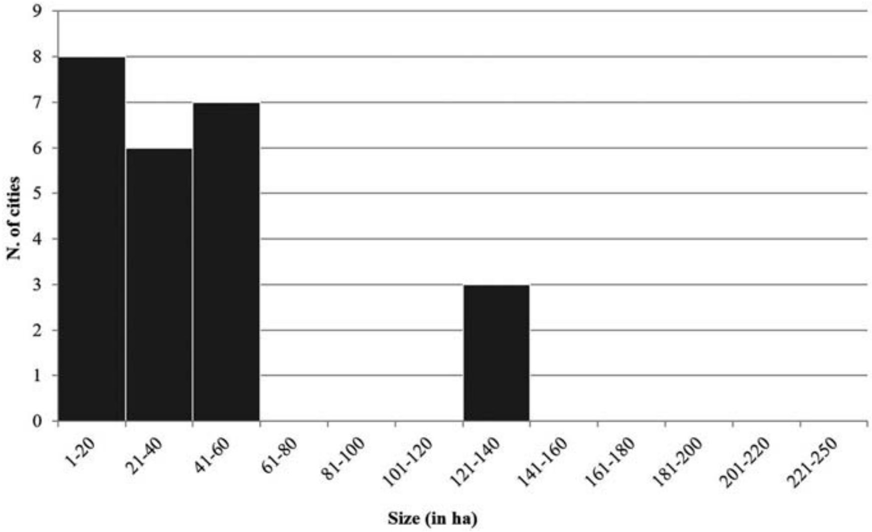

FIGURE 3.3 Estimated sizes of the self-governing cities of Narbonensis

3.4 *Narbonensis*

The majority of self-governing cities of Narbonensis were relatively small. Based on their sizes (Fig. 3.3), we can distinguish three categories of cities: small (1–20 ha), medium-sized (20–40 ha) and large ones (over 100 ha).

The first group includes several small cities that had been granted the honorary status of colony in Late Republican-Augustan times, but whose size had remained fairly modest (between 4 and 10 ha). Among these are *Antipolis*, *Apta*, *Carpentorate*, *Luteva* and *Apollinaris Reiorum*. These small political entities were most likely the legacy of a highly fragmented pre-Roman past. In fact, this province, in its very early phase (from the late second century BCE until Caesar) was characterised by the presence of many small settlements, described by Christol as 'républiques villageoises'.[23] Some of these polities will have been annexed to political entities favoured by Rome. Others, small as they were, would have survived the initial re-organisation of the province undertaken under Caesar and the second triumvirate and the second one that followed in Augustan times.[24]

23 Christol 2007: 34.

24 Among the most famous victims of this sort of administrative re-organisation were the *oppida ignobilia XIX* and the XXIV *Nemausensibus adtributa* mentioned by Pliny, which probably lost their autonomy between Caesarian and Augustan times and were annexed to the territory of an ally favoured by the Romans.

A number of medium-sized colonies measured between 21 ha and 40 ha. Among these were veteran colonies founded in Caesarian/Triumviral times, such as *Aquae Sextiae*, *Col. Valentia*, *Col. Arelate* and *Baeterrae*. Important harbour cities—such as Greek Marseille, the Roman colony of Fréjus and Arles—were usually equipped with very extensive port facilities (for example, that of Fréjus that covered c. 20 ha).[25] With Augustus' Germanic wars and the opening of the German frontier, the Rhône axis became more and more crucial to army supplies. Possibly this is the reason that cities like Narbonne and Marseille, which enjoyed a privileged position in Republican times, were deprived of some of their advantages under the Empire, compelled to share the limelight with cities like Arles and Nîmes.[26] *Narbo* remained one of the largest cities in Narbonensis, sharing this honour with the colonies of *Nemausus* and *Vienna*. Overall, the shape of the distribution of city size in Gallia Narbonensis was closer to that of Lugdunensis, in the sense that large cities were more the exception than the rule they were in Aquitania, as we shall shortly see.

3.5 *Aquitania*

In Aquitania, only a very few cities were smaller than 20 ha (e.g. *Cossium* and Dax).[27] Most cities were medium-sized (21–60 ha), for instance, *Elimberrum*, *Segodunum*, *Rouession*, *Anderitum*, *Condevicnum*, *Lugdunum Convenarum* and *Lactora*. The majority of these were located either in mountainous regions (e.g. Midi-Pyrenees or the southern edge of the Massif Central) or south of the Garonne. Larger cities (over 80 ha) were more numerous than in the provinces discussed above, with Clermont occupying 90 ha, Poitiers 80 ha and Bourges 100 ha. The existence of these large centres can be explained by their rich and fertile territory. The high number of villas and rural settlements excavated around them are proof of this (cf. below).

25 After 49 BC, *Massilia* retained its former size (Trézigny 1995). Harbour cities were usually characterised by a very extensive port.

26 Nonetheless, they continued to be dynamic centres of trade, as the many examples of regular restoration work show (Christol 2010: 623–624).

27 The plan of the city of Dax extended farther south of the actual built-up area, suggesting that part of the land that had initially been planned for occupation remained empty. The orthogonal grid of Bazas, in south-west Aquitania, is known largely thanks to aerial photography. Although its street grid is not dated, it extended over 7–9 ha. However, so far few elements suggest that it was an actual city (Réchin 2004: 36, Esmonde-Cleary 2003).

3.6 *Belgica and Germania Inferior*

Belgica was fairly similar to Lugdunensis, but the cities of the former province were much larger on average.[28] The number of cities of unknown size is not significant enough to explain this pattern.[29] Belgica had three very large self-governing cities: the capital Reims (200 ha), Trier (250 ha)[30] and Amiens (160 ha). All the others were smaller than 100 ha. In Germania Inferior we know of only three cities smaller than 40 ha (*Forum Hadriani*, *Noviomagus* and Xanten).[31] The provincial capital was Cologne (117 ha), and Tongeren was also quite large (100 ha).

3.7 *The Whole Picture*

Reviewing the study area in its entirety, it seems that most of the administrative centres were medium-sized (Fig. 3.4). Around 60 % measured between 20–60 ha, only 13 % were smaller than 20 ha (and they were largely located in Narbonensis and in the Western Alps) and 37 % measured over 60 ha, with an even smaller percentage (c. 10 %) measuring over 100 ha.

In the nineteenth century the city size distribution in some early modern countries, including that in France between the nineteenth and twentieth centuries, followed a power law.[32] This means that city sizes, when ordered by rank and plotted on a log-log graph, form a straight line with a slope of –1.[33] The rank-

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28 The average city size is 63 ha in Lugdunensis, 56 ha in Aquitania, 42 ha in Narbonensis, 46 ha in Britannia, and 84 ha in Belgica.

29 Of unknown size: *Gesoriacum* and *Castellum Menapiorum*.

30 Trier presents an interesting case. It is possible that its remarkable Late Roman phase has had the effect of amplifying its second century CE estimate. That said, even in its early phases its street-grid alone extended over 130 ha. The city is known to have expanded even more in the second century CE, when it covered at least 200 ha (see Morscheiser-Niebergall 2015: 263, Fig. 1). After the Diocletianic Reforms it became the capital of the province of Belgic Gaul (replacing Reims) and the capital of the prefecture of the Gauls. Trier had control of much of the whole Western Roman Empire and, at that time, was one of the largest cities in the whole Empire. Its Late Roman walls were 6,500 m long and enclosed an area of c. 285 ha.

31 Since *Coriovallum* (Heerlen) was a *vicus*, it has been excluded from the analyses undertaken in this study. In some older publications this settlement is credited with a built-up area of only 10–15 ha. Traces of habitation have been detected in an area of c. 50 ha, but there are no reasons to think that this area was entirely occupied by domestic buildings. The baths of *Coriovallum* are four times smaller than those of Xanten. The walls of the latter city enclosed an area of 73 ha.

32 Guérin-Pace 1995.

33 The first scholar to recognise this pattern was the geographer Auerbach, who demonstrated that the product of the population of a city with its rank in the hierarchy was constant (P*r=K). His observation was later developed and the underlying principle is now

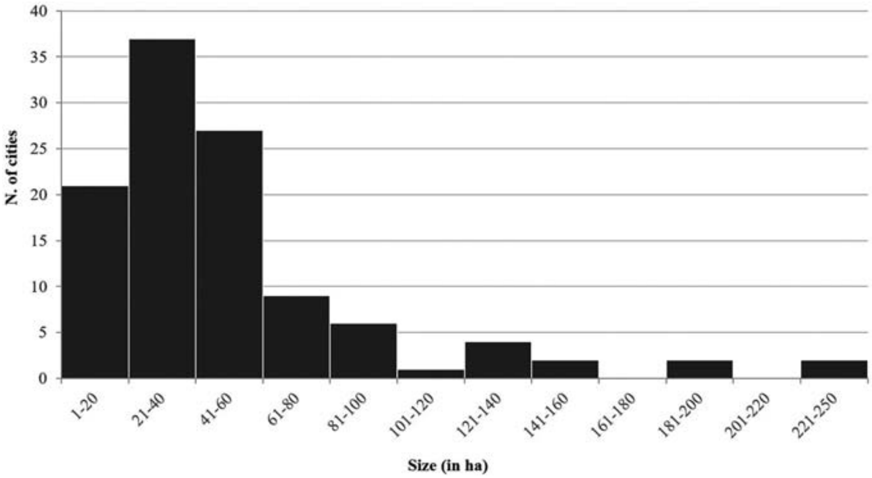

FIGURE 3.4 Size distribution of the self-governing cities of the north-western provinces

size graph in Fig. 3.5 reveals that the size distribution of ancient Roman cities in the north-western provinces of the Empire does not follow a straight line.

Nevertheless, we can distinguish three groups of cities. At the top of the urban hierarchy lie the largest centres in the urban system (top-left of the graph). Unlike the largest cities of modern France, this group of cities did not fit a power line. This means, for example, that our largest city Trier (250 ha, Rank 1) was not twice the size of our second largest city, Lyon (230 ha, Rank 2). Neither was it three times larger than Reims (200 ha), which occupied Rank 3. We have already discussed how imprecise the individual figures are, and perhaps some might also disagree with the order of the ranking given here. However, even if we were to swap the order of these towns and rearrange some of the figures slightly, few would quarrel with the statement that the largest city in the study area cannot possibly have been twice the size of the second-largest city, and so on. This supports the conclusion that the largest cities of the north-western provinces should be considered as a series of large regional primates dominating a series of regional settlement hierarchies.

known as the rank-size law, or Zipf's Rule, taking the name of the philologist and statistician who in 1941 and again in 1949 thought he discovered a major principle in human activities, corresponding to the principle of minimal resistance in physics (Zipf 1941, Zipf 1949). In 1931 the statistician Robert Gibrat proposed a slightly different formulation of the same rule. He offered an expression of an exponential type, a log normal distribution that worked for all population systems, whereas Zipf was looking only at the power function given by cities (Gibrat 1931).

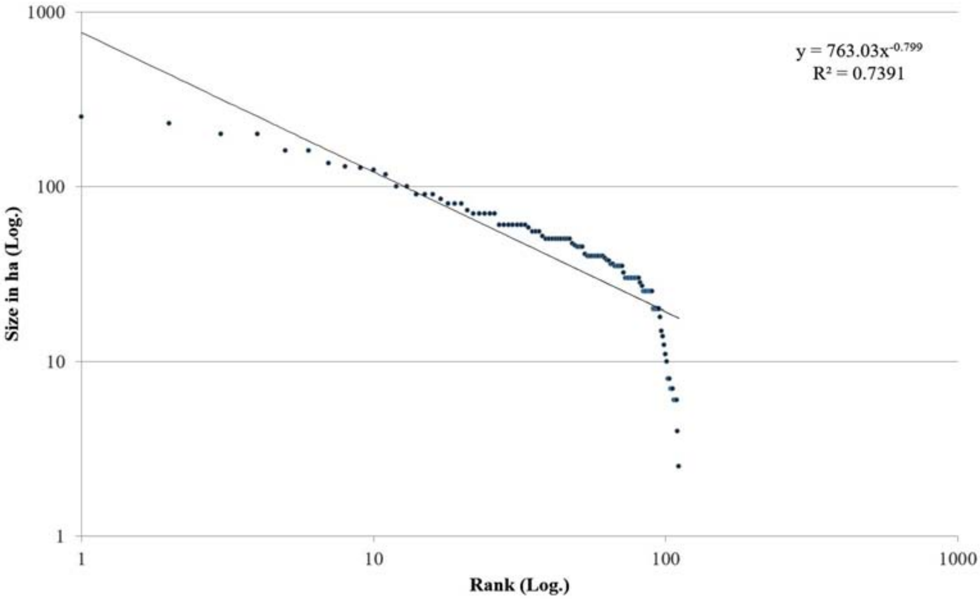

FIGURE 3.5 Rank-size analysis of the administrative cities of north-western provinces

These cities are followed by an anomalously large number of medium-sized cities, a 'bump' that has proven to be typical of many other provinces of the Roman Empire, including the Roman cities in the Italian peninsula.[34] The high proportion of medium-sized cities suggests that they are more likely to have relied on the resources within their own territories and that this stinted potential growth. As Luuk de Ligt has observed in a paper about the urban system of Early Imperial Italy, we are confronted with an urban system that, overall, "can be conceptualised as consisting of a series of 'modules' each of which contained one city and its territory".[35] Following a hypothesis formulated by the American economist Paul Krugman, he argues that the variation in size of these 'modules' depended on their distinctive local histories and geographical settings.[36]

Finally, a third group of small cities (< 20 ha) can be distinguished. Given their modest size, even a small error in the accuracy of the size estimate can drastically affect the robustness of this analysis, to the point that it becomes meaningless.

34 See the graph in De Ligt 2016: 35.
35 De Ligt 2016: 39.
36 Krugman 1996.

4 The Largest Cities in the Roman North-West

Only less than 10% of the self-governing cities were larger than 100 ha. This makes them exceptionally large cities by ancient standards (their populations could range between 15,000–30,000 people). Why and how did these particular cities grow so large?

The simple fact that the urban systems in the regions concerned appear to have been hierarchical implies that there was a disproportionate movement of energy, capital, and people to larger towns. If we look at Figure 3.6, we can clearly see that these major cities were nodal points within the urban system of the Western Roman Empire. They lie along some of the main urban and transport corridors that run across these provinces, often at their beginning or their terminus. These axes include the Rhône-Saône corridor, the Garonne corridor and the routes connecting Lyon to Saintes (*via Agrippa*), Lyon to Cologne, Cologne to Boulogne-sur-Mer, Reims to Boulogne-sur-Mer and Boulogne-sur-Mer to London. These last four axes accrued major importance during Roman times when they became vital military supply lines, demonstrating that exceptional urban growth often depended on the configuration of transportation routes. All these corridors share the fact that they all have major port cities at one of their extremities and hence they must have played a very important role in long-distance trade and in the fiscal and political economy of the Roman Empire.[37] Each of them, we could say, acted as an *emporium* in which goods were collected and exchanged for forward transmission.

However, before jumping to the conclusion that these large centres were nothing more than large trading hubs, we should not overlook the fact that these cities were imbued with major political and symbolic power. They were the local representatives of the administrative and ideological institutions of Rome throughout the length and breadth of the Empire, and this ideological dimension was perceptible in the urban structures with which they were embellished.[38] Only some of this class of city consisted of actual provincial capitals (e.g. Lyon, Reims). However, all of them stand testament to how the

37 What Mattingly (2006b) calls 'administrative trade', intended to support the mechanism of the state (e.g. the food supply to Rome and certainly to the frontiers). Tacitus (*Hist.* 5:23) mentions consignments of supplies from Gaul headed towards the Rhine. Some of this 'administrative trade' was made up of taxes paid in kind that were collected and stored in the huge *horrea* in these cities.

38 Viewed from the perspective of Architectural Communication Theory (Smith 2011: 174), they are 'deliberate statements about identity, status, wealth and power' (Rapoport 1988; 1990a). For the concept of the 'materialisation of ideology' see De Marrais et al. 1996.

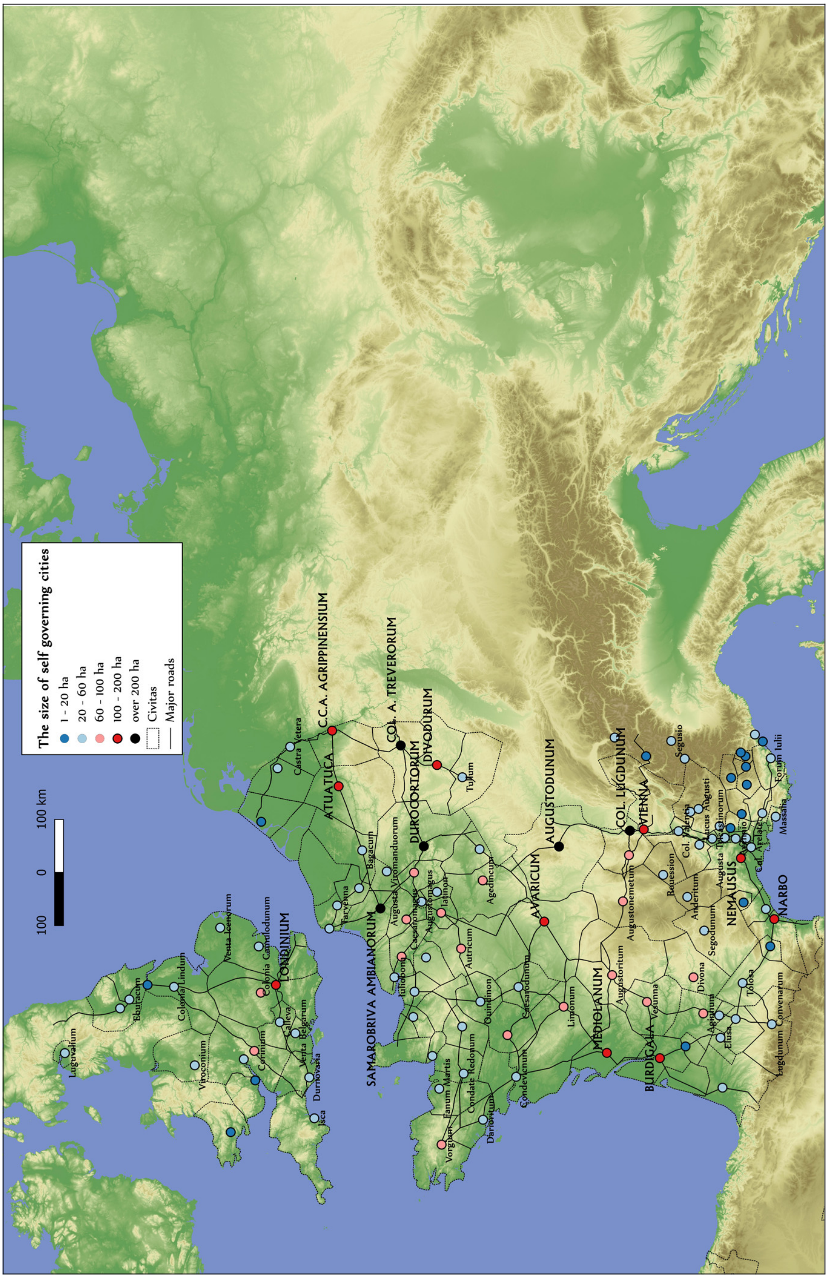

FIGURE 3.6 City-size distribution in the north-western provinces

planners and architects who designed them, as well as the people who commissioned these works (e.g. Augustus who commissioned or authorised the construction of the circuit walls in Nîmes), were trying to make a political statement on a regional or provincial level.

The high degree of standardisation in the forms of the civic buildings (e.g. *fora*, *basilicae*) found across every self-governing city of the north-western provinces, regardless of its size, announced "the common participation of the local elite in a regionally extensive noble class with an established canon of public architecture".[39] On the other hand, the elaborate layout and zoning of these 'imperial cities' transmitted the ideological circumstances that lay at the basis of their foundation and were expressed in terms of the spatial relationships between their principal urban elements. In material terms, this means that they were the objects of massive construction programmes devised to fulfil their new role of demonstrating to all their new subjects and old enemies the greatness and power that was Rome.

These cities were provided with some truly monumental infrastructures (e.g. the aqueducts of Lyon and *Vienna* or their cultural districts), opulent public buildings (e.g. the baths of Trier) and impressive *fora*. Not only were these building projects huge in terms of their actual size and number, their cost must also have been enormous. They were the living proof that Rome, assisted by its state machinery composed of bureaucrats, civil servants, senior officials of the military forces and the like, was able to command the enormous labour force required for the quarrying, the transportation over long distances of precious dressed stone and the erection of these colossal buildings. They are likewise evidence of the funnelling of wealth from a rich elite who decided to contribute to their monumentality through euergetic acts.[40]

Wierschowski was able to demonstrate unusually high levels of both immigration and emigration among private individuals in these cities. The most likely explanation of these movements of people is the huge opportunities they could offer their inhabitants from all social classes, ranging from the beggar to the rich landowner, the merchant, the bureaucrat, and the most powerful men in the Empire.[41] Being designed to be a mighty stage for the display of wealth, influence and power, it was natural that they should become giant political magnets. They could attract the highest elites of the neighbouring

39 Smith 2011: 175.

40 Cf. Gutiérrez et al. 2015. Looking at the cities that had been at the centre of ancient empires ('imperial cities'), the authors have observed the same symbolic power in the colossal architecture of those cities.

41 Wierschowski 1995.

civitates and of their provinces. Hence it can be surmised that—compared to smaller cities—a higher proportion of the money invested in the embellishment of these cities originated elsewhere, as it was money deployed by individuals who owned their land and made their fortunes beyond the city territory (presumably in their own region of origin), but who—for their own personal advantage—decided to invest their money in these major cities. For example, the amphitheatre in Lyon was built by a citizen of the *civitas* of the *Santones* (jointly with his son and nephew), who was a priest of the federal cult of the Three Gauls in Lyon.[42] We also know of at least two *decuriones* originating from other *civitates* who resided in Lyon (*nomine incolatus*) and were allowed to join the town council of the colony.[43] These are just a few examples of how these cities were able to attract money and resources.

5 Large Cities as Nodal Points for Transportation and Trade

One element that distinguishes the largest cities of Gaul and Germania Inferior from the others is the concentration of the huge *horrea* (warehouses) situated within them. Given their large size, it is usually supposed that some of them were public. However, there is little doubt they were also used to store the many types of comestibles (e.g. grain but also olive oil, wine) that were needed to sustain the fairly dense population of these cities. Unfortunately, not enough attention has been paid to the *horrea* located in an urban environment in the north-western provinces. One of the best known examples comes from the city of *Vienna* (modern Vienne). Aligned along the left bank of the Rhône, a whole new quarter of c. 5 ha was established *ex nihilo* in Augustan times. After extensive preliminary work had been carried out, this area was organised around a very regular road network and five, large warehouses were built, the biggest of which covered 9,200 sqm and measured over 200 × c. 50 m. Together they provided a storage capacity of over 4 ha.[44]

The warehouses in Vienne share similar ground plans, with narrow rooms (12.50 × 5.20 m.) opening onto a central corridor. This typology resembles that

42 *AE* 1959, 81.

43 This was the case of Minnius Vestinus (*CIL* XII, 1871) and Sex. Vencius Iuuentianus (*CIL* XII, 1585), who are thought to have been natives of some other *civitas* in Gallia Narbonensis or in the Alpine provinces (Bérard 1999).

44 In Vienne, there were other warehouses, also in the heart of the city but not necessarily on the river. They were smaller and possibly privately owned (for example, that in the ancient district of Vienne at Saint-Romain-en-Gal).

of other *horrea*, such as those excavated in *Ostia*, but also those in *Patara* and *Myra* (Asia Minor), *Cuicul*-Djemila (Algeria) and Lepcis Magna (Libya).[45] There is no doubt that the capacity of these warehouses greatly exceeded the needs of the city. Hence they were probably used to store the revenues of some of the Gaulish *annona* that were earmarked for shipment to Rome and some that were certainly sent to the *limes*, as attested by Tacitus.[46] In Belgica and Germania Inferior, *horrea* have been found in Cologne, Reims, Amiens and Tongeren. Given their large size, those in Cologne were most probably public. Their remains that once consisted of four rectangular buildings arranged around a central courtyard, are located on an ancient island in the Rhine. In Amiens, eight warehouses were located on the banks of the river Avre. Each approximated 35 × 10 m. The capacity of these warehouses, too, appears to have exceeded the city's needs.[47]

In the case of Bordeaux and Lyon, we unfortunately do not yet have enough evidence. The ancient harbour of Bordeaux is known from the texts of Ausonius and Paulinus of *Pella*. It lay in the very heart of the city and, as in London, it was built on a quay and it was subjected to problems with tides.[48] However, it is very unlikely that the whole infrastructure was confined to this basin, which covered no more than 1.5 ha. Given Bordeaux's importance on the maritime Atlantic route (from here, goods were sent south towards the Spanish coasts of Asturias, Galicia, and Lusitania and the north, in the direction of Armorica and Brittany),[49] it is likely to have been much larger.[50] Nor has the harbour in Lyon yet been found. It is possible that the *horrea* were located on the Isle of the Kanabae that formed a natural *emporium* and was headquarters of the administration of the *nautae* (of Saône and Rhône), but we are still awaiting more evidence.[51]

It is clear that the populations of these cities could have all been easily sustained by the goods stored in the *horrea* located either in their vicinity or within their walls. However, the question that would improve our understanding of these cities is: 'Could these cities potentially have been supported solely by the

45 Cf. Arce and Goffaux 2011, Alzon 1965, Babled 1892, Marin and Virlouvet 2003, Rickman 1971, Rickman 1980. For a rich bibliography on *horrea militaria*, that are not discussed here, see Domínguez 2011.

46 Savay-Guerraz et al. 1998.

47 It has been argued that Metz also had large warehouses, but this claim has still to be confirmed (Coquelet 2011).

48 Perring 2015: 28.

49 Galliou 1982: 122.

50 Gerber 2004: 10–11, Gerber 2005: 77–83, Gerber 2010.

51 Audin 1986.

territory they administered?' We shall try to answer this question by looking at the self-governing cities of Gaul, Germania Inferior and their territories, as these have been reconstructed by scholars on the basis of Medieval ecclesiastical sources (but also up to the Ancien Régime) and epigraphic evidence.[52]

6 Could the Largest Cities Have Been Sustained by Their Own Territories?[53]

Figure 3.7 shows that almost all the cities that occupied areas larger than 100 hectares controlled administrative territories larger than 5,000 km². There can be no doubt that the populations of all of these cities could have easily been sustained by the food crops grown in their huge administrative hinterlands.

Based on the estimates for the size of administrative territories alone, Lyon can be identified as the only city in the Three Gauls that was truly anomalous. While the city of *Lugdunum* occupied an area of about 230 hectares in the late second and early third century CE, the size of its administrative territory can be estimated as approximately 750 km².[54] If we use a multiplier of 150 inhabitants per hectare, we end up with an estimate of about 35,000 for the population of the *civitas* capital. The relatively small *civitas* territory cannot possibly have supported an urban population of this order of magnitude. The fact that a primate city such as Lyon would have been able to absorb a consistent amount of resources from outside its administrative boundaries is a phenomenon well-attested in pre-industrial urban studies. A well-known example is London which had already begun to control surpluses from ever wider areas in the Middle Ages.[55]

A basic issue raised by the approach employed so far is that we have been looking only at the relationship between *civitas* size in comparison to town size. In doing so, it has been assumed that large towns with small territories would never have been able to sustain themselves, regardless of the amount of farmland within their territories. This is certainly a major flaw in the analysis. Unquestionably agricultural output in different regions can vary considerably.

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52 In Britain, our knowledge of the *civitas* boundaries is much less solidly based.

53 For the size of territories see Appendix B. These figures are not intended to be precise estimates but rough approximations.

54 My estimate of the size of *Lugdunum*'s territory (757 km²) is based on a Thiessen polygon analysis. For a good discussion of the epigraphic and archaeological evidence relating to the *civitas Lugdunensium* see Béal (2007: 15–26).

55 Campbell et al. 1992.

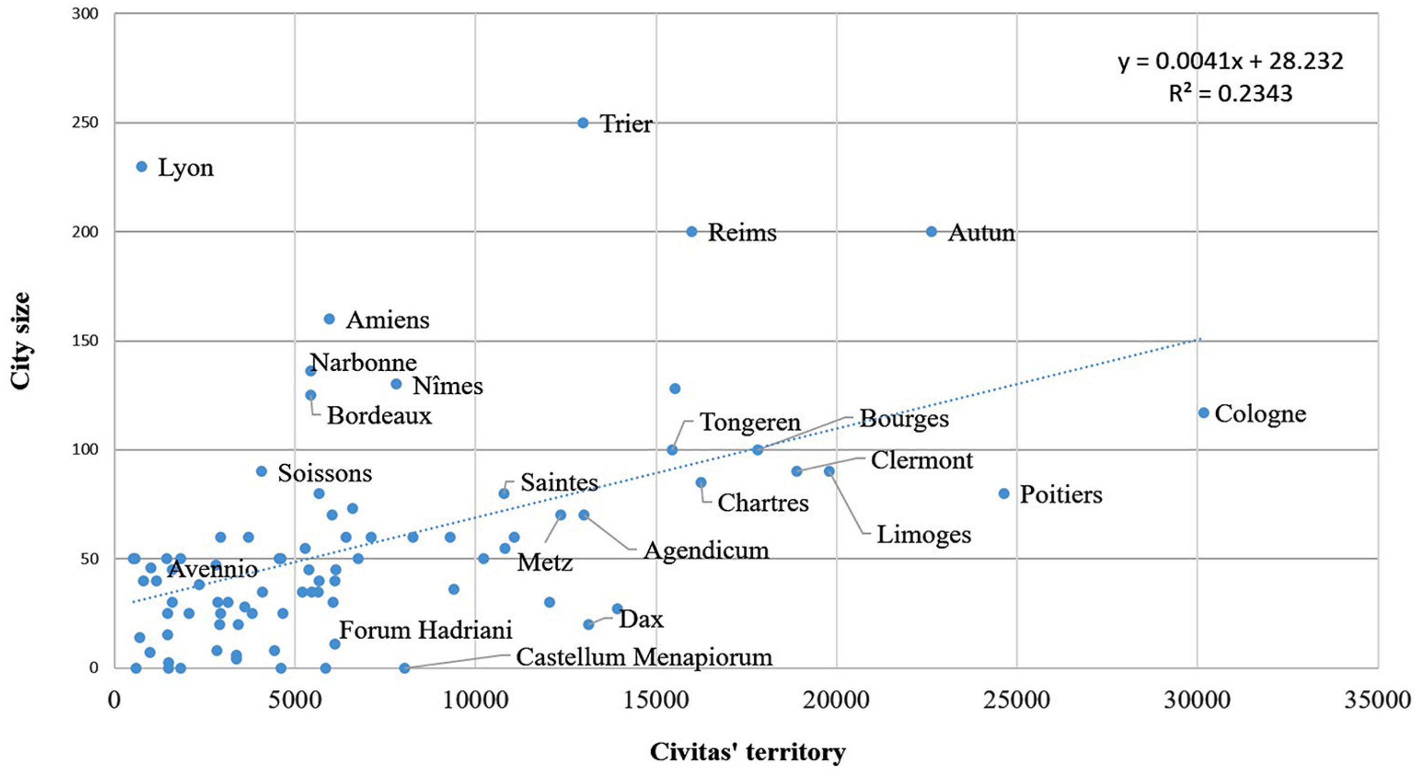

FIGURE 3.7 Scatterplot showing a very weak relationship between city size and size of territory

Therefore, the size of the *civitas* alone is not enough to establish how self-governing cities could be sustained. One way of dealing with this problem is to compare the number of known villas in each *civitas* and to use this figure as an approximation for evaluating the agricultural capacity of the *civitatis*.[56]

Using this alternative approach, it emerges that all the cities situated in the right half of the graph controlled very fertile territories characterised by a dense scattering of villas. The territory of Bourges, for example, is known to have been very heavily populated with villa estates (over 100 have been recorded). A similar assumption can be made for the territories of the cities of Chartres and Tongeren, in which large numbers of villas are well attested (over 40 villas) and for those of Autun, Trier, Reims, and Cologne.

Thanks to a recent inventory of the villas of Gaul and the Germanic provinces compiled by Pierre Ouzoulias, it is possible to calculate the difference in the density of villas per km^2 for the different *civitates* (Fig. 3.8).[57] Ouzoulias' inventory reveals that in *civitates* with a high density of villas the number of villas per square kilometre might have been in an order of magnitude higher

56 When doing so, it is important not to ignore the biases entailed in such an approach. In fact, the data are biased by the state of research. Some areas are clearly over-represented compared to other regions. This is the case, for example, of those areas that have been object of multiple researches because of the high number of construction work to which they have been subjected (areas like the Paris Basin—between Arras, Metz, Langres, Bourges, Chartres, and Rouen) or because of the visibility of villas, especially using aerial photography (Picardy and Berry). In some areas villas might have been less monumental, making it more difficult to identify them.

57 The data used in this paper are derived by the map published in Ouzoulias (2013: 255). Any mistakes in the transposition from the map to the list of villas per *civitas* are mine alone, although they are expected to be statistically insignificant. The data point for Bourges has been excluded from Fig. 3.8 because its unusually high value (117) is too far removed from other observations (twice as large as the second-highest score). The explanation is that numerous archaeological projects have been carried out in this region, making it one of the best-understood in France. As indicated by Ouzoulias, the incompleteness of the data set and the ambiguities inherent in the archaeological evidence imply that the data should be interpreted with caution. The approach used by Ouzoulias to compile his *corpus* of 1,166 villas is the same as that employed by Bertoncello and Gandini 2005 and by Gandini 2008: 229–233. He retained as villas only those buildings that had (i) a residential space with elements of comfort such as a hypocaust, a colonnade etc., (ii) storage facilities suggesting that agricultural production surpassed family needs (subsistence farming) and was market-oriented. This approach is quite restrictive. Ouzoulias' maps do not show those establishments whose internal organisation or functions are not yet understood (e.g. 'supposed' villas known only through archaeological surveys). Only those establishments whose plans are sufficiently known to allow a comprehensive or partial assessment of the functionality of spaces—thanks to archaeological excavations, geophysical survey, or aerial photography—were retained.

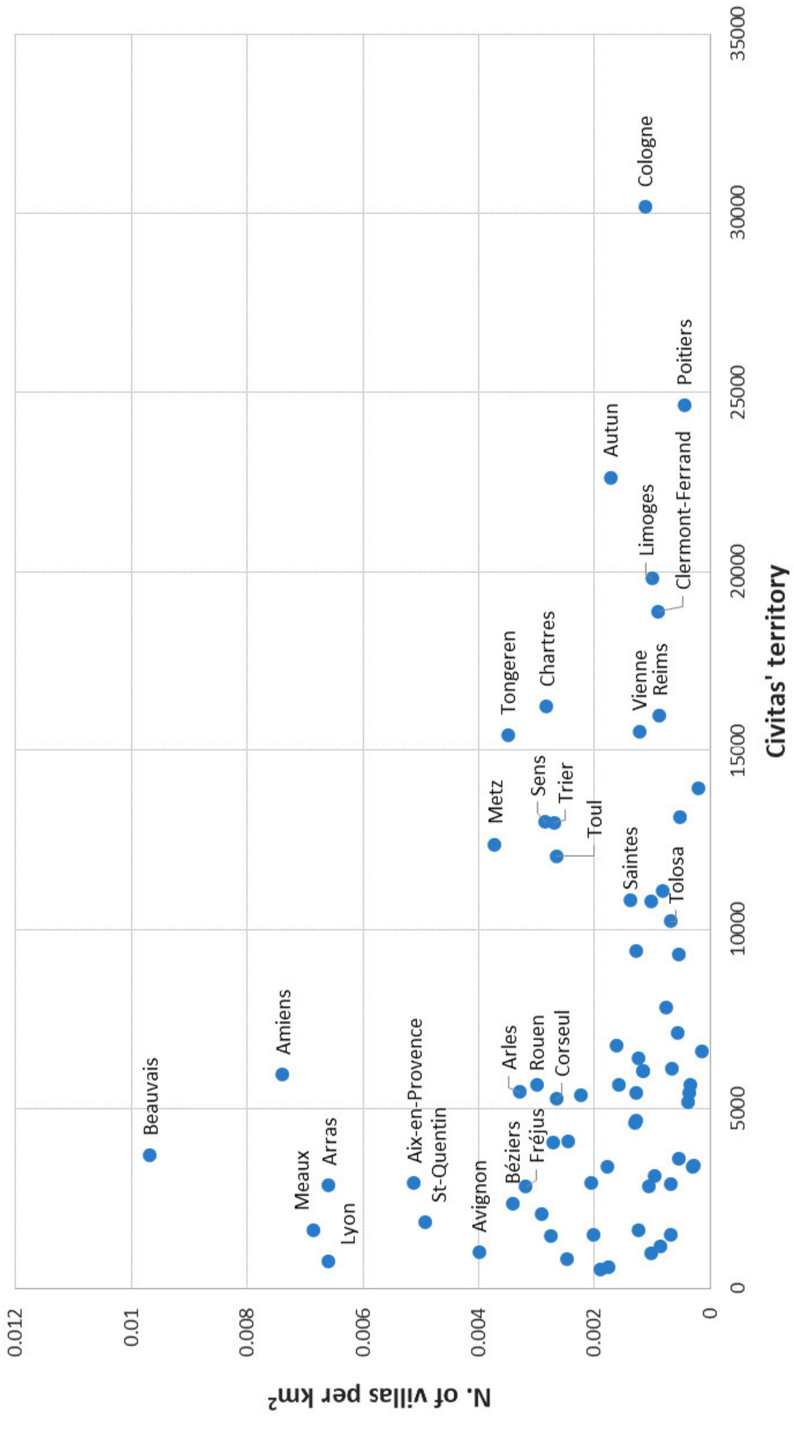

FIGURE 3.8 Scatterplot showing the density of villas in the *civitates* of Gaul and Germania Inferior

than in those *civitates* in which the density of villas was low. The *civitates* with the highest density of villas (in particular those located in Picardy and Narbonensis) were often small in size, suggesting that areas with large amounts of fertile land tended to have multiple small autonomous polities. Another interesting observation that can be made is that those cities that were larger than 100 ha generally lie at the bottom of the graph, suggesting that—on the basis of the data available—the density of villas in their territory was not remarkable (e.g. Vienne, Reims, Autun, Cologne).[58] One possible explanation is that large *civitates* had fewer villas per square kilometre because villa densities tended to decrease with increasing distance from the *civitas* capital.[59] Alternatively, the largest cities in the Three Gauls and Germania Inferior might have been sustained in part by forms of agricultural production that were not co-ordinated from villas.

The graph shown in Figure 3.9 makes it possible to identify some *civitates* that might have sent some of their agricultural surpluses to other cities. Candidates include the territories of those cities that lie below the trend line (i.e. Aix-en-Provence, Arras, Arles, Toul, Sens, Beauvais, Chartres, Metz, Tongeren and Bourges—the last does not appear in the graph because it was considered to be an outlier). The sizes of these cities are smaller than would be expected on the basis of the large number of villas situated in their territories. In some cases a different explanation is possible. For example, in several *civitates* some agricultural resources were shared between the capital and a number of subordinate urban centres (the 'secondary agglomerations' of French literature). This was certainly the case in the *civitas* of the *Bituriges Cubi*, which had a multi-polar settlement system whose origins can be traced back to pre-Roman times. During the Roman period, the capital Bourges (100 ha) developed alongside other flourishing agglomerations some of which, such Argenton-Saint-Marcel (70 ha) and Néris-les-Bains (80 ha), were large. The agglomeration of Argenton-Saint-Marcel is fairly well understood since it has been investigated for many years. A sanctuary, monumental fountain, theatre, amphitheatre and baths have all been excavated, clearly showing how opulent and dynamic this settlement was.

In the case of the *civitas* of Tongeren, the capital was flanked by only small central places which were located on the transport routes connecting the

58 The only exception is Lyon. It must, however, be pointed out that only 5 villa sites have been identified in the territory of this city. The relatively high density of villas that has been calculated for this area reflects the small size of the *civitas* territory.

59 Cf. Hodder and Millet 1980, to be read with Mattingly (2006a: 369–375). Notable concentrations of villas have also been observed around many town-like 'secondary agglomerations'.

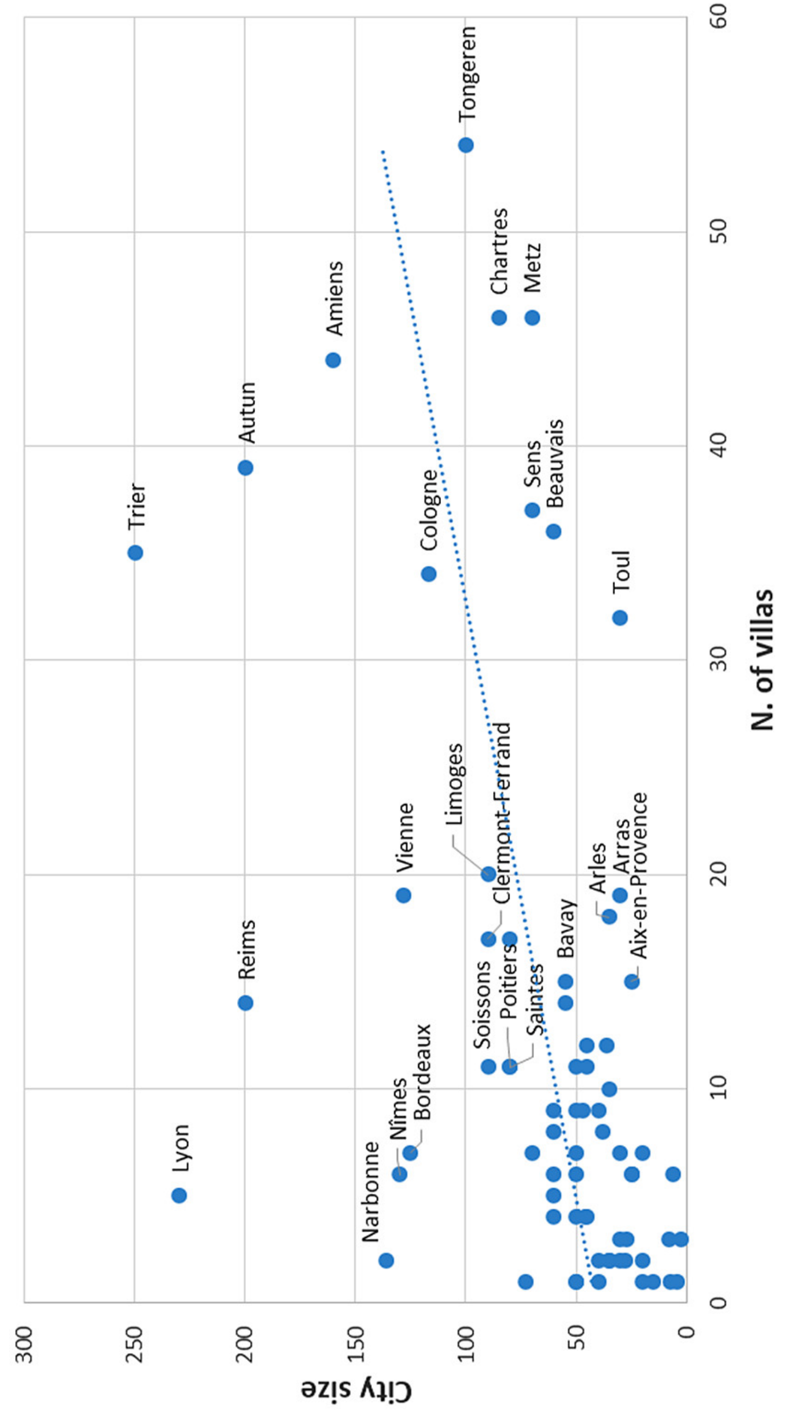

FIGURE 3.9 Scatterplot showing city sizes and the number of villas lying in their territories

civitas capital with Cologne (to the east) and Bavay (to the west). The spatial arrangement of these small central places seems to reflect the operation of the 'transportation principle' (K=4 system) conceived by Christaller. It is possible that in this case the surpluses of the numerous villas were directed not only to the *civitas* capitals and to secondary settlements situated within their administrative territories but to other destinations as well (e.g. military units stationed along the *limes* of Germania Inferior or perhaps also unusually large civilian cities, such as Cologne).

7 Conclusions

This paper has attempted to investigate the issue of the sustainability of cities by looking at their size, the extent of their territory and the number of villas situated within their *civitates*. All of the estimates on which my analyses are based should be regarded as approximations of the real values, and the models presented would certainly benefit from an increased level of sophistication; one that takes into account a wider range of socio-political, economic and demographic variables. Despite these methodological caveats, some of my conclusions seem incontrovertible. We can be certain, for instance, that Roman Lyon was substantially dependent on external resources.

Unlike Lyon, the second-largest and third-largest cities of Roman Gaul, Narbonne and Bordeaux, controlled administrative territories larger than 5,000 km^2, making it likely that the populations of these cities could be sustained by crops grown in their administrative hinterlands. However, while neither of these cities is likely to have been structurally dependent on food supplies originating from the administrative territories of other cities, we still have to explain why they were considerably larger than other *civitas* capitals that also controlled very large administrative territories.

At least part of the explanation must lie in the fact that Narbonne and Bordeaux were the provincial capitals of, respectively, Narbonensis and Aquitania. However, to this day we do not know what exactly the administrative (or *de facto*) status of 'provincial capital' really meant in practice. It might be particularly enlightening to look at the epigraphic records from *Lugdunum*, *Narbo* and *Burdigala* in order to improve our understanding, for example, of their political and administrative functions, as well as their role in commercial trade or state-organised transportation.

Appendix 1: Estimated Sizes of the Self-governing Cities of the North-Western Provinces

Alpine provinces	Self-governing city	Built-up area/ walled area	Size estimate (in ha)
Alpes Cottiae	Brigantio	Built-up area	25
Alpes Cottiae	Segusio	Built-up area	30
Alpes Graiae	Forum Claudii Ceutronum	Built-up area	12.5
Alpes Maritimae	Brigomagus	Built-up area	7
Alpes Maritimae	Cemenelum	Built-up area	20
Alpes Maritimae	Eburodunum		NA
Alpes Maritimae	Entrevaux	Built-up area	7
Alpes Maritimae	Rigomagus		NA
Alpes Maritimae	Salinae	Built-up area	10
Alpes Maritimae	Senez		NA
Alpes Maritimae	Valdeblore		NA
Alpes Maritimae	Vintium		NA
Alpes Poeninae	Forum Claudii Vallensium	Built-up area	25
Aquitania	Aginnum	Built-up area	70
Aquitania	Anderitum	Built-up area	35
Aquitania	Augustonemetum	Built-up area	90
Aquitania	Augustoritum	Built-up area	90
Aquitania	Avaricum	Built-up area	100
Aquitania	Burdigala	Built-up area	125
Aquitania	Civitas of the Boiates	Built-up area	NA
Aquitania	Condevicnum	Built-up area	35
Aquitania	Cossium	Built-up area	8
Aquitania	Aquae Tarbellicae	Built-up area	20
Aquitania	Divona	Built-up area	60
Aquitania	Elimberrum	Built-up area	25
Aquitania	Elusa	Built-up area	50
Aquitania	Forum Segusiavorum	Built-up area	60
Aquitania	Lactora	Built-up area	40
Aquitania	Limonum	Built-up area	80
Aquitania	Lugdunum Convenarum	Built-up area	36
Aquitania	Mediolanum	Built-up area	80
Aquitania	Rouession	Built-up area	28
Aquitania	Segodunum	Built-up area	27

(*cont.*)

Alpine provinces	Self-governing city	Built-up area/ walled area	Size estimate (in ha)
Aquitania	Vesunna	Built-up area	60
Belgica	Augusta Suessionum	Built-up area	90
Belgica	Augusta Viromanduorum	Built-up area	50
Belgica	Augustomagus	Built-up area	40
Belgica	Bagacum	Built-up area	55
Belgica	Caesaromagus	Built-up area	60
Belgica	Castellum Menapiorum		NA
Belgica	Col. Augusta Treverorum	Built-up area	250
Belgica	Divodurum	Built-up area	70
Belgica	Durocortorum	Built-up area	200
Belgica	Gesoriacum	Built-up area	30
Belgica	Nemetacum	Built-up area	30
Belgica	Samarobriva Ambianorum	Built-up area	160
Belgica	Tarvenna	Built-up area	30
Belgica	Tullum	Built-up area	30
Britannia	Calleva	Built-up area	40
Britannia	Colonia Camulodunum	Built-up area	55
Britannia	Colonia Glevum	Built-up area	50
Britannia	Colonia Lindum	Built-up area	40
Britannia	Corinium	Built-up area	70
Britannia	Durnovaria	Walled area	39
Britannia	Durovernum	Walled area	52
Britannia	Eburacum	Built-up area	40
Britannia	Isca	Walled area	37.5
Britannia	Isaurium	Walled area	30
Britannia	Londinium	Built-up area	160
Britannia	Luguvalium	Built-up area	32
Britannia	Moridunum	Built-up area	6
Britannia	Noviomagus	Walled area	40
Britannia	Petuaria	Built-up area	6
Britannia	Ratae	Walled area	41
Britannia	Venta Belgarum	Walled area	58
Britannia	Venta Icenorum	Built-up area	36
Britannia	Venta Silurum	Walled area	18
Britannia	Verulamium	Built-up area	70

(*cont.*)

Alpine provinces	Self-governing city	Built-up area/ walled area	Size estimate (in ha)
Britannia	Viroconium Cornoviorum	Built-up area	50
Germania Inferior	Atuatuca	Built-up area	100
Germania Inferior	Castra Vetera	Walled area	73
Germania Inferior	Colonia Claudia Ara Agrippinensium	Built-up area	117
Germania Inferior	Forum Hadriani	Walled area	11
Germania Inferior	Ganuenta		NA
Germania Inferior	Noviomagus	Built-up area	35
Lugdunensis	Agedincum	Built-up area	70
Lugdunensis	Aregenoua	Built-up area	25
Lugdunensis	Augustobona	Built-up area	45
Lugdunensis	Augustodunum	Walled area	200
Lugdunensis	Augustodurum		NA
Lugdunensis	Autricum	Built-up area	85
Lugdunensis	Caesarodunum	Built-up area	50
Lugdunensis	Col. Lugdunum	Built-up area	230
Lugdunensis	Condate Redonum	Built-up area	50
Lugdunensis	Crouciaconnum		NA
Lugdunensis	Darioritum	Built-up area	40
Lugdunensis	Fanum Martis	Built-up area	55
Lugdunensis	Iatinon	Built-up area	45
Lugdunensis	Ingena	Built-up area	25
Lugdunensis	Iuliobona	Built-up area	35
Lugdunensis	Iuliomagus	Built-up area	60
Lugdunensis	Lutetia	Built-up area	60
Lugdunensis	Mediolanum Aulercorum	Built-up area	20
Lugdunensis	Noiodounon Diablintum	Built-up area	25
Lugdunensis	Noviomagus Lexoviorum	Built-up area	20
Lugdunensis	Ouindinon	Built-up area	30
Lugdunensis	Rotomagus	Built-up area	80
Lugdunensis	Vorgium	Built-up area	60
Narbonensis	Carcasso	Built-up area	2.5
Narbonensis	Antipolis	Built-up area	4
Narbonensis	Apta Iulia	Built-up area	6
Narbonensis	Luteva	Built-up area	7
Narbonensis	Dinia	Built-up area	8

(*cont.*)

Alpine provinces	Self-governing city	Built-up area/ walled area	Size estimate (in ha)
Narbonensis	Carpentorate	Built-up area	14
Narbonensis	Apollinaris Reiorum	Built-up area	15
Narbonensis	Glanum	Built-up area	20
Narbonensis	Aquae Sextiae	Built-up area	25
Narbonensis	Col. Valentia	Built-up area	30
Narbonensis	Lucus Augusti	Built-up area	30
Narbonensis	Col. Arelate	Built-up area	35
Narbonensis	Baeterrae	Built-up area	38
Narbonensis	Arausio	Built-up area	40
Narbonensis	Alba Helviorum	Built-up area	45
Narbonensis	Avennio	Built-up area	46
Narbonensis	Forum Iulii	Built-up area	47
Narbonensis	Augusta Tricastinorum	Built-up area	50
Narbonensis	Massalia	Built-up area	50
Narbonensis	Tolosa	Built-up area	50
Narbonensis	Vasio	Built-up area	50
Narbonensis	Vienna	Built-up area	128
Narbonensis	Nemausus	Built-up area	130
Narbonensis	Narbo	Built-up area	136
Narbonensis	Cabellio		NA

Appendix 2: Estimated Sizes of *Civitas* Territories

Civitas	Self-governing city	Estimated *civitas* territory (in km2)
Abricantes	Ingena	1487
Aedui	Augustodunum	22625
Alba	Alba Helviorum	5393
Ambiani	Samarobriva Ambianorum	5952
Andecaves	Iuliomagus	7123
Apta	Apta Iulia	3371

(*cont.*)

Civitas	Self-governing city	Estimated *civitas* territory (in km2)
Aquae Sextiae	Aquae Sextiae	2935
Arausio	Arausio	1159
Arelate	Col. Arelate	5470
Arveni	Augustonemetum	18889
Atrebates	Nemetacum	2877
Ausci	Elimberrum	4670
Avennio	Avennio	1003
Baeterrae	Baeterrae	2344
Baiocasses	Augustodurum	1499
Batavi	Castra Vetera	6590
Bellovaci	Caesaromagus	3719
Bituriges	Avaricum	17822
Bituriges Viviques	Burdigala	5433
Boii	Boii	1827
Cabellio	Cabellio	605
Cadurci	Divona	8276
Caleti	Iuliobona	4094
Batavi	Noviomagus	6099
Carcasso	Carcasso	1491
Carnutes	Autricum	16249
Carpentorate	Carpentorate	712
Cenomani	Ouindinon	6067
Convenae	Lugdunum Convenarum	9399
Coriosolites	Fanum Martis	5281
Diablinthes	Noiodounon Diablintum	3822
Eburovices	Mediolanum Aulercorum	3422
Elusates	Elusa	1451
Esuvii	Noiodounon	5855
Forum Iulii	Forum Iulii	2825
Cannanefates	Forum Hadriani	6099
Gabali	Anderitum	5196
Lactorates	Lactora	809
Lemovices	Augustoritum	19812
Leuci	Tullum	12040
Lexovii	Noviomagus Lexoviorum	2904

(*cont.*)

Civitas	Self-governing city	Estimated *civitas* territory (in km2)
Lugdunum	Col. Lugdunum	757
Luteva	Luteva	980
Massilia	Massalia	572
Mediomatrici	Divodurum	12372
Meldi	Iatinon	1604
Menapii	Castellum Menapiorum	8047
Morini	Gesoriacum	3143
Namnetes	Condevicnum	5653
Narbo	Narbo	5443
Nervii	Bagacum	10823
Nemausus	Nemausus	7810
Nitiobriges	Aginnum	6039
Osismii	Vorgium	11071
Parisii	Lutetia	2933
Petrocores	Vesunna	9311
Pictavi	Limonum	24630
Redones	Condate Redonum	4615
Remi	Durocortorum	15983
Reii	Apollinaris Reiorum	1486
Ruscino	Col. Ruscino	3376
Ruteni	Segodunum	13928
Santones	Mediolanum	10790
Segusiavi	Forum Segusiavorum	6408
Senones	Agendicum	12994
Sogiontii	Dinia	4438
Suessiones	Augusta Suessionum	4066
Tarbelli	Aquae Tarbellicae	13140
Tolosa	Tolosa	10220
Treveri	Col. Augusta Treverorum	12978
Tricasses	Augustobona	6123
Tricastini	Col. Augusta Tricastinorum	525
Tungri	Atuatuca	15459
Turones	Caesarodunum	6763
Ubii	Col. Claudia Ara Agrippinensium	30177
Unelli	Crouciaconnum	4612

(*cont.*)

Civitas	Self-governing city	Estimated *civitas* territory (in km2)
Valentia	Col. Valentia	1615
Vasates	Cossium	2841
Veliocasses	Rotomagus	5673
Vellavi	Rouession	3621
Veneti	Darioritum	5680
Viducasses	Aregenoua	2064
Vienna	Vienna	15538
Viromandui	Augusta Viromanduorum	1833
Vocontii	Vasio	4572

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CHAPTER 4

The Roman 'Small Towns' in the Massif Central (*civitates* of the *Arverni, Vellavii, Gabali, Ruteni, Cadurci* and *Lemovices*): Methodology and Main Results

Florian Baret

1 Introduction

Urbanism in Roman Gaul appeared in a wide variety of forms, from monumental towns to simple mining villages. In 1986 Mangin gave the following definition of what he called 'secondary agglomerations': "any attested archaeological site that is situated between a farm or an isolated *villa* and the *civitas* capital, that is to say from a peasant village and a modest road station to a town whose landscape closely resembled that of the *civitas* capital".[1] Since then, research has enabled the documentation not only of the frequency of these sites but also of their diversity. Today, one of the biggest challenges is to characterise and understand the interactions between these different forms of settlement and their role in the functioning of *civitates*.

Since the publication of Mangin's work on Franche-Comté and the Bliesbruck-Renheim colloquium[2] in 1992, a number of studies have been published on the 'secondary agglomerations' of Roman Gaul, that correspond to the 'small towns' of English-speaking research. The Côte-d' Or was covered in 1994,[3] Lorraine in 1997,[4] the Région Centre in 1999 and again in 2016,[5] Languedoc-Roussillon in 2002,[6] and Brittany and Pays-de-la-Loire in 2012.[7] So far the Massif Central has not featured as the subject of this sort of research, making only a very brief appearance in a list of sites that was published in 1992.[8] This paper,

1 Mangin et al. 1986.
2 Petit et al. 1994.
3 Bénard et al. 1994.
4 Massy 1997.
5 Cribellier 2016a; Cribellier 2016b; Bellet et al. 1999.
6 Fiches 2002.
7 Monteil 2012.
8 Mangin et al. 1992.

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which is based on some of the research carried out for my doctoral research, seeks to remedy this state of affairs.[9] The *civitates* whose territories have been investigated (Fig. 4.1) represent more than 80 % of the French Massif Central. This space also corresponds to the areas covered by the research *Dyspater* Programme (Spatial Dynamics of Territorial Development from Proto-history to the Present Day) carried out by F. Trément.[10]

2 Data, Study Objectives and Constitution of the Corpus

The list of small towns in the *civitates* of the Massif Central that was published in 1992 has only been updated in a few isolated studies for the Auvergne in 2005[11] and for the area of the *Ruteni* in 2007.[12] Although the archaeological documentation is outdated, it is by no means easy to come up with a new survey that would do justice to the evidence currently available.

The written and cartographic sources for the Massif Central in the Roman imperial period are meagre. The Roman itineraries (Antonine Itinerary, Anonymus of Ravenna) circumvent the Massif Central, and only the Peutinger Map indicates 21 localities and several major roads, like the route from Lyon to Saintes.

An analysis of some 30 Roman and medieval authors highlights the absence of references to small towns in the Massif Central before the fifth and sixth centuries CE. In this late period Sidonius Apollinaris and Gregory of Tours mention a few places, but the Roman origin of some of them is questionable.

The epigraphic corpus consists of 121 items that have been found in 42 potential small towns, but 54 % of these texts are funerary inscriptions and 23 % religious dedications. Many of them are very fragmentary. Hence this category of evidence cannot be regarded as a reliable guide to the small towns of the region.

In a nutshell the small towns of the Massif Central can only investigated by turning to archaeological data, even though not a single site has been adequately researched and some of the information provided by existing publications is outdated.

For the purpose of my research, archaeological and bibliographic data have been gathered, and an empirical classification of the sites has been proposed

9 Baret 2015.
10 Trément 2013.
11 Girardy-Caillat 2010.
12 Pisani 2011a.

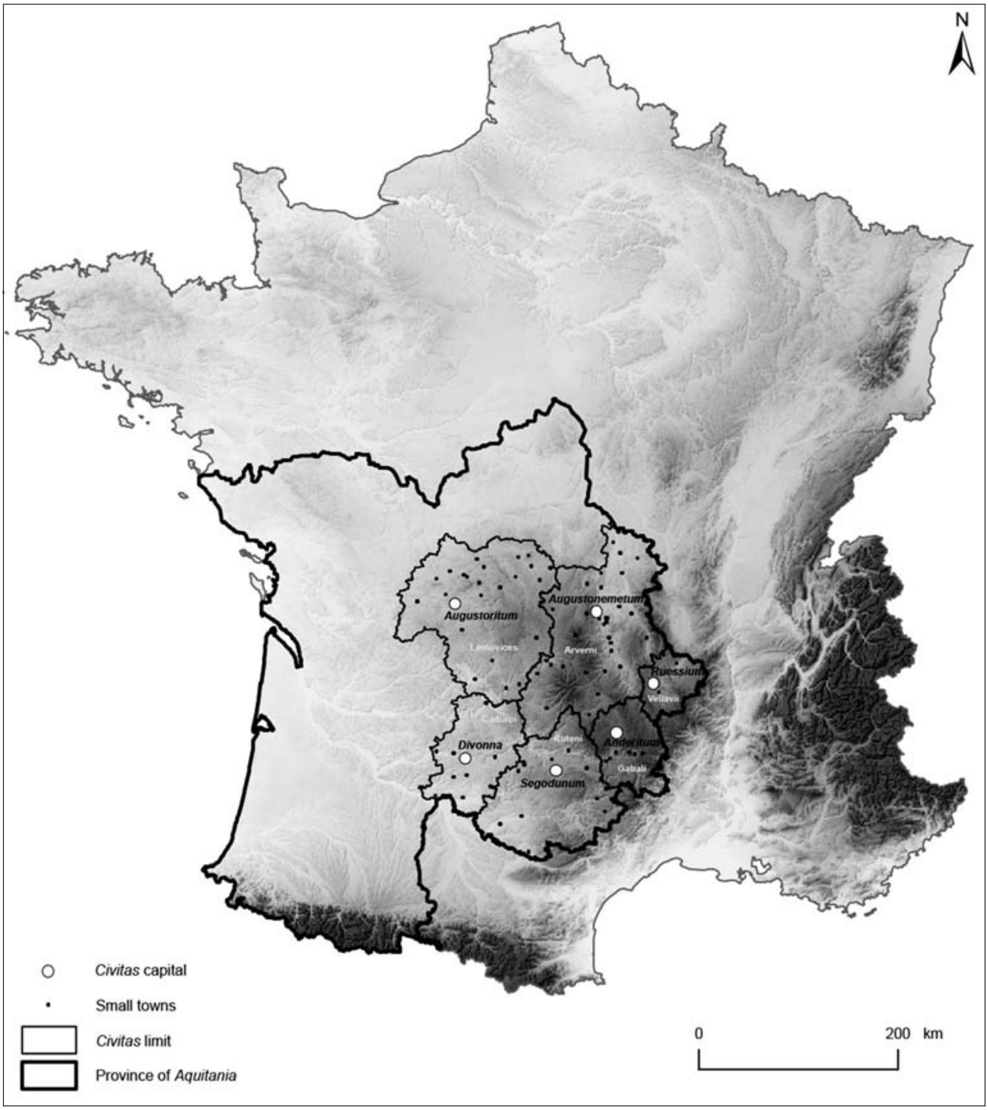

FIGURE 4.1 Study area
GIS: F. BARET

according to three levels of reliability. Fifty-four sites for which alternative interpretations have been proposed or at which the archaeological evidence is simply insufficient have been eliminated from my inquiries. Fifty-five sites at which archaeological discoveries are abundant in a limited space have been classified as 'hypothetical small towns', either because we have no plans of archaeological remains or because no remains indicating the existence of a

secondary agglomeration of Roman date, such as a large isolated cemetery or a temple and its ancillary buildings, have been detected. Finally, 38 sites at which at least one of the following criteria is fulfilled have been identified: the existence of a town-like lay-out revealed by aerial photography or excavation, the discovery of an inscription using the term *vicus* to refer to the site, the appearance of a site whose location is confirmed on the Peutinger Map, or the discovery of at least one public building. Only these settlements have been classified as 'small towns'.

3 Classification of Small Towns

The 93 (55 + 38) sites selected have been analysed statistically using the modalities associated with 13 different descriptors (Multiple Correspondence Analysis and Ascending Hierarchical Classification).[13] For the purpose of this analysis, the following descriptors were used:

1. *Implantation*: this descriptor allows us to propose a date of the implantation of the occupation in its grouped form.
2. *Construction:* this descriptor is linked to the presence of archaeological finds at the sites, making it possible to mark and specify the modes of construction present in the small town, allowing for gradations reflecting the diversity and the richness of the constructions.
3. *Proto-historic occupation*: this marker is used to define the form of the previous occupation, specifying whether there was a displacement between its occupation in the Iron Age and that in the Roman imperial period.
4. *Public building*: the modalities of this descriptor make it possible to mark the presence of the principal monumental buildings, independently of each other, but also according to the different possible combinations.
5. *Funerary*: the modalities of this marker cover many possibilities: from the isolated burial to a necropolis yielding burial coffins.
6. *Area*: this descriptor is made up of various sub-categories that were defined by observing differences in the elevation of the locations at which the agglomerations were situated.
7. *Occupation*: the time intervals for the agglomerations have been defined by periods of 100 years, but allowing for the possibility of specifying occupations between less than 100 years and more than 500 years.

13 This approach was inspired by the *Archaeomedes* programme, for which see Van der Leeuw et al. 2003.

8. *Manufacturing activities*: it would have been difficult to propose a modality for each craft listed and for all the combinations observed. Therefore the only realistic option was to mark either the complete lack of manufacturing activity or the presence of diversified activities without specifying the preponderance of any one of them, or the presence of diversified activities with one activity having greater importance or the presence of a single activity. Finally, a modality of this descriptor makes it possible to indicate the presence of nearby mines.
9. *Medieval occupation*: this marker makes it possible to specify the later evolution of occupation, especially if a medieval occupation developed *in situ* or at another site.
10. *Morphology*: this descriptor marks the presence of streets and the existence of differentiated neighbourhoods.
11. *Communication*: using this descriptor, connections to communication channels can be analysed by allowing for 9 modalities: absence of a communication axis, location on a road or at a crossroads, location at a crossroads between a land route and a river axis with known crossing, with known or unspecified crossing or port, but also location at a crossroad of land routes at which one of the axes crosses a river and at which there is evidence of a port.
12. *Inscriptions*: with 6 modalities allows us to specify the size and nature of the epigraphic record of the agglomeration.
13. *Hydraulic equipment*: this marker makes it possible to indicate the presence of an aqueduct or a *castellum divisorium*.

4 Clustering

The statistical analysis used to classify the small towns of the Massif Central takes into account only the six descriptors characterising *urbanitas*: *Public Buildings, Area, Morphology, Communication, Inscriptions* and *Hydraulic Equipment*, supplemented by the descriptors *Proto-historic Occupation* and *Manufacturing Activities*. The results of this statistical analysis are valid for the period from the first to the third century CE.

Closer analysis of the results makes it possible to group the descriptors according to their importance in the classification. The two most decisive descriptors are *Communication* and *Public Buildings*. Moreover, an analysis of the correlations between the modalities reveals two main groups: settlements that score positively for *Manufacturing Activities, Proto-historic Occupation* and *Communication* and a second group with high scores for other descriptors.

Statistical analysis reveals the existence of frequent associations of the same modalities in these two groups, thereby making it possible to characterise various types of small towns and to group them into clusters.

Using this approach, seven clusters grouping different types of small towns can be distinguished (Figs. 4.2 and 4.3):

Cluster 1 is defined only by the modality marking the presence of a road that crosses a river and the presence of a port. Only *Condatomagus* qualifies.

Cluster 2 is also built around a single modality indicating the presence of a sanctuary and a theatre. It includes 5 small towns that fulfil this criterion, and 3 other settlements that did not have a sanctuary and a theatre but nevertheless have ended up in this category simply because they did not fit into any of the other clusters. This anomaly illustrates the limits of the statistical analysis for some situations.

Cluster 3 comprises 46 agglomerations that are defined in a general way by a linear lay-out along a single street and by a known area (between 5 and 12 ha). Any previous occupation was variable. Some of these settlements were provided with a temple; others are located at a crossroads.

Cluster 4 is composed of 17 small towns that are frequently equipped with public buildings (sometimes several structures, but sometimes none) and developed on the sites of proto-historic villages. All settlements belonging to this cluster are known to have occupied areas of between 20 and 30 ha, but there is a wide variety of modalities for *Morphology*, *Manufacturing Activities*, *Inscriptions* and *Hydraulics*, reflecting, among other factors, a lack of information about these aspects of the sites.

Cluster 5 includes 18 small towns that succeeded a proto-historic rural settlement and were provided with a temple. In many cases the areas occupied by these settlements are known (between 12 and 20 ha), and evidence of manufacturing activities is also systematically present at these sites. However, so far they have not yielded any epigraphic or any hydraulic element. Their position in relation to the road network is also not consistent. Again a few sites, such as the Col-de-Ceyssat, present a situation that could depart from the general description of this class, a sharp reminder of the limitations of the analysis.

Cluster 6 is made up of five *civitas* capitals (Limoges, Javols, Rodez, Cahors, Clermont-Ferrand) and the town of *Cassinomagus*. These settlements are characterised by the presence of a wide array of monumental buildings, and by the presence of streets, aqueducts and inscriptions.

Cluster 7 includes just two small towns: Martres-de-Veyre and Vichy. It scores positively on three modalities: installation at a crossroads with a crossing and a port, continuity with a pre-Roman *oppidum* and the presence of manufacturing activities featuring specialised production.

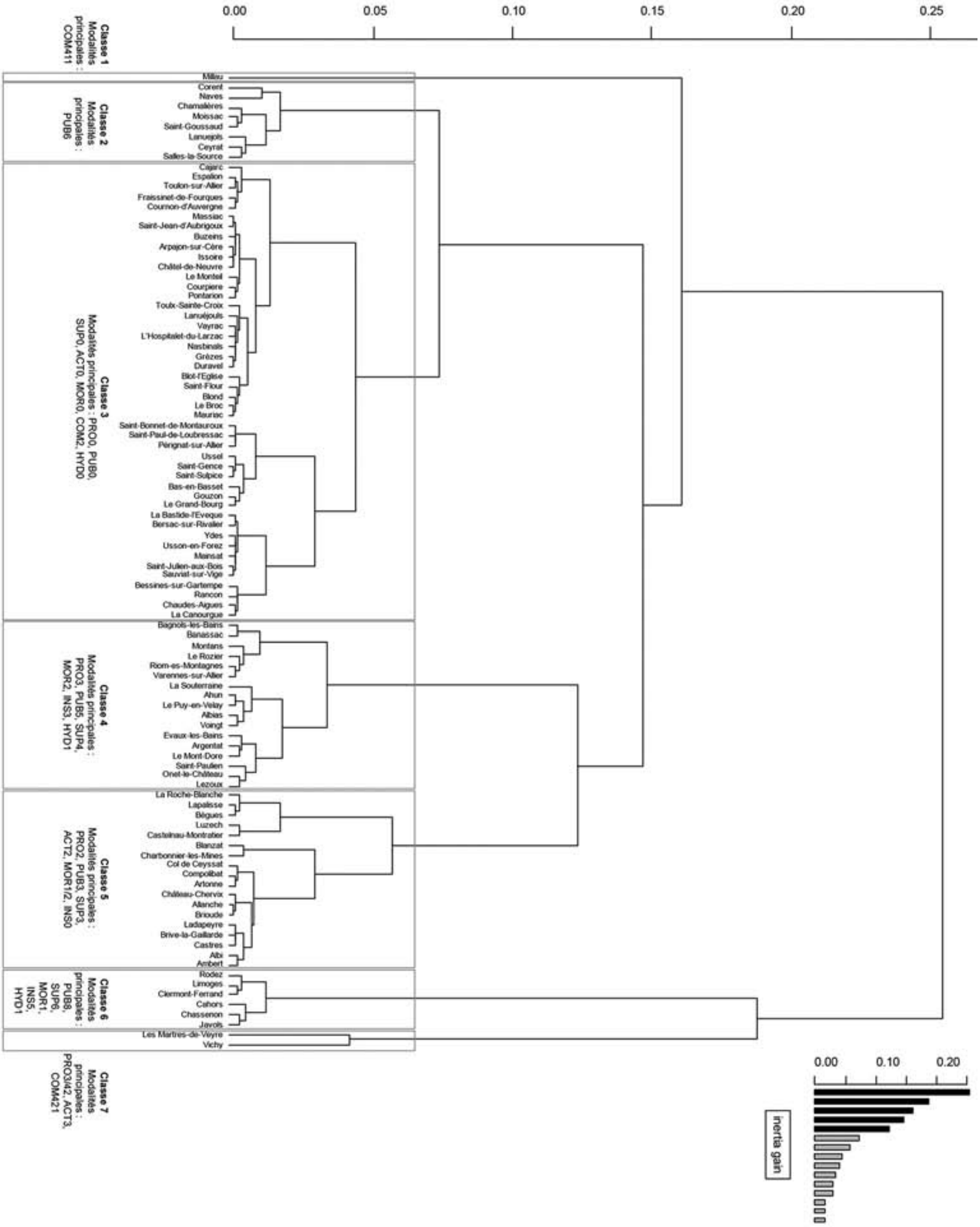

FIGURE 4.2 Cluster tree of small towns
CAD: F. BARET

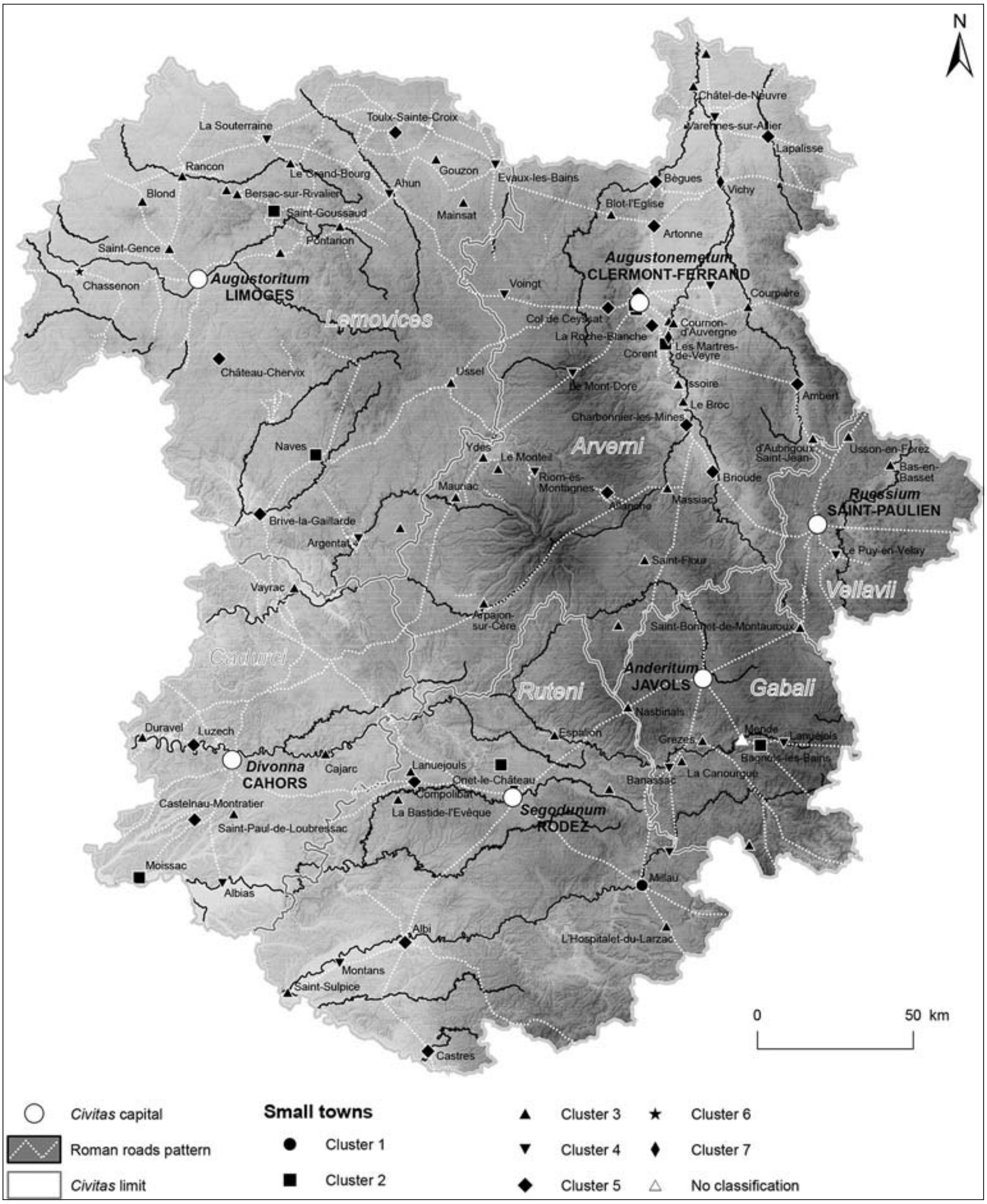

FIGURE 4.3 Map of the clusters of small towns
GIS: F. BARET

Two observations must be made about these groupings. One of these is that the presence of some anomalous sites in various clusters demonstrates the limits of the statistical method. However, these cases are very rare and do not undermine the whole classification. Some of these anomalies disappear if some modalities are merged into a single modality to give them a more important value. The second observation concerns the historical significance of the clusters. While the clusters do reflect a historical phenomenon, they also depend on the state of documentation that is bound to improve as new discoveries are made. For both these reasons, my classification must be regarded as an experiment and as a starting point for new discussions and reflections.

5 Monumentality

The problem of monumentalisation is common in the study of Roman towns, but discussions of this topic are often limited to the most important urban centres. One exception is an article by A. Bouet and F. Tassaux, published in 2003, that surveyed the small towns of Aquitania in the Julio-Claudian period in the light of their proto-historic origins and their architecture.[14] Since then, the monumentalisation of the small towns has often been paid more attention, notably during the sixth Aquitania colloquium, which was held in September 2015.[15]

The classification of small towns proposed in the previous section has highlighted the importance of monumental buildings among the archaeological descriptors. They are also important as clues to the chronologies of the small towns, as they are often the only structures to have been excavated.

Among the small towns of the Massif Central, three groups can be distinguished: small towns without any known monumental buildings (38 sites), small towns that boasted a single public building (41 sites) and small towns with several buildings (14 sites). These three groups point to the existence of an urban hierarchy.

Within the category of small towns equipped with a single monumental building, a further distinction can be made between small towns that had a bath-house (6 sites) and small towns that had a sanctuary (35 sites, i.e. 37.6% of all the small towns in the Massif Central). The documentation rarely allows

14 Bouet 2005.
15 Bouet 2016.

an architectural approach to be taken to these sanctuaries, whose existence is sometimes only hinted at by an inscription.

More than 44 % of the small towns were endowed with just one monumental building, and in over three-quarters of these towns this building was a sanctuary. This seems to have been one of the main characteristics of minor small towns.

Among those small towns that had multiple public buildings, associations between various types of monumental buildings can be observed, for instance, between the presence of a temple and the presence of a theatre, as at Saint-Goussaud (*Lemovices*)[16] and Corent (*Arverni*),[17] or between the presence of a temple and the presence of a bath-house, as at Le Mont-Dore (*Arverni*).[18]

Some small towns show signs of exceptional developments, for example, *Cassinomagus* (*Lemovices*) that had a sanctuary, a bath-house, a theatre and an amphitheatre.[19] Other examples include Tintignac (*Lemovices*), at which the remains of a theatre, a putative bath-house, and a religious centre with three large buildings have been detected,[20] and Onet-le-Château (*Ruteni*), which possessed a bath-house, plus two temples and their ancillary buildings.[21] Such highly monumentalised small towns testify to a significant investment by local elites and to the desire of these elites to follow the example set by the *civitas* capitals. Such places could be regarded as representing the second tier of the regional urban hierarchies of the *civitas* territories.

Lack of information about the spatial aspects of small towns often makes it difficult to pinpoint the locations of monumental buildings. Nonetheless, the evidence currently available suggests that spatial arrangements did vary from place to place. At Corent a theatre was erected in a monumental complex located in the town centre, and at *Cassinomagus* the bath-house likewise occupied a central position. In other settlements, such as Évaux-les-Bains,[22] the bath-house seems to have been constructed a little distance from the town. Most of the sanctuaries were situated on the margins of the town (for instance, at Allanche, Arpajon-sur-Cere, Artonne, Bègues, Blot-l'Église, Charbonnier-les-Mines and Le Broc), but in some cases they were part of monumental complexes that were situated in a more central position (for example,

16 Dercier 1902.
17 Poux et al. 2015.
18 Dousteyssier et al. 2016.
19 Aupert et al. 2016.
20 Loubignac 2014.
21 Pisani 2011a.
22 Roger 2008.

at Corent, Ceyrat, Blanzat, La Roche-Blanche, Mont-Dore, Voingt, Chassenon and Onet-le-Château).

In some cases these variations can be explained as a reflection of differences in local topographies, but they also reveal a gradual development of the urban scene set in train by population movements and by piecemeal elite investment in the construction of buildings.

The data available at present do not yet provide a sufficient basis for a detailed analysis of the chronological developments in the monumentality of small towns. However, discussing Roman Aquitania, A. Bouet and F. Tassaux have suggested two phases of development during the Julio-Claudian period. In their view, "in the first part of the period [...] we are mostly dealing with wooden *fana*. The second part of the Julio-Claudian period saw the more general use of stone and an increase in the size of monuments. Some theatres are also linked to the Julian-Claudian period, especially the second half."[23] For the Three Gauls as a whole the evolution of monumental buildings, studied by B. Pichon, shows a gradual decline, with the abandonment of the bath-houses in the middle of the third century CE, that of the theatres between the second quarter and the end of the third century, and finally of the sanctuaries that continued to be frequented until the beginning of the fourth century CE. According to Pichon, "in the course of the fourth century CE, all the monumental markers of the urbanity of the Early Empire had thus disappeared outside the capital cities."[24]

6 Small Towns and Manufacturing Activities

It is impossible to understand the economic role of the small towns of the Massif Central without investigating the manufacturing activities pursued in these agglomerations.[25]

Perhaps unsurprisingly, the importance of manufacturing in the economies of small towns varied from *civitas* to *civitas*. In the *civitates* of the *Arverni*, the *Ruteni* and the *Vellavii* manufacturing activities play an important role in almost all of the small towns that show a systematic presence of craftsmen,

23 Bouet et al. 2005: 272.

24 Pichon 2012: 127.

25 For A. Ferdière "for the most part of the Gaul provinces, a large part of the artisanal production seems to have been concentrated in the secondary agglomerations, in which we recognise today the determining role in the economy of Gaul and more particularly in the production of manufactured objects, and in their commercial dissemination." (Ferdière 2007: 10).

but in the *civitates* of the *Cadurci*, the *Lemovices* and the *Gabali* approximately one-third of the sites have not yielded any traces of such economic activity.

On the basis of an inventory of the different activities, 23 combinations of associated industries can be distinguished; two of them dominant. Evidence of pottery production has been found in 61% of the small towns. Since the Massif Central comprises almost all the centres for production of *terra sigillata* that existed in Central and Southern Gaul (Millau, Montans, Lezoux), this is not surprising. The second most important industrial activity was metallurgy, traces of which have been found in 57% of the small towns. The relative importance of these activities is not homogeneous in each of the *civitates* and the small towns that were located in their territories, but displays differing industrial profiles.

An analysis of the importance of manufacturing activities highlights two scenarios. Many small towns appear to have specialised in a single product (often *terra sigillata*) but maintained a basic diversity of auxiliary activities. Alongside such specialised settlements, we encounter small towns that reveal a greater industrial diversity and the absence of a dominant industry. The industrial profile of this second group of agglomerations resembles that of the *civitas* capitals. It is in settlements belonging to this second group that we find evidence of activities characteristic of urban areas, such as bone-working. Examples include Vichy, Varennes-sur-Allier and Martres-de-Veyre.

These two scenarios confer a primary role on the small towns in the economy on two levels: in the production of manufactured goods that were traded over long distances and as centres for the production of manufactured items catering to the primary needs of local and regional populations. Until the end of the first century CE the manufacturing activities remained "essentially an activity of proximity".[26]

Turning to the positioning of workshops within the urban spaces, three different situations can be discerned: the installation of workshops outside the small towns, the co-existence of multiple workshops within the town—a situation that N. Monteix sees as "the fundamental characteristic of the Roman town",[27]—and the existence of large industrial quarters, as in the case of the large pottery production centres.[28]

26 Loridant 2001: 185.

27 Monteix 2010: 158.

28 For the region of Orléans, researchers have proposed the hypothesis of a hierarchy of production. Workshops producing ceramics for export are surmised to have been located on the outskirts of the agglomeration, while those catering to the demand of the local population are thought to have been located in the city itself (Roux et al. 2012). As pointed out

7 The Morphology of Small Towns

Our brief discussion of the locations of monumental buildings and manufacturing activities in the small towns has already highlighted the existence of different urban morphologies. If we widen the scope of our investigations to the general forms of the small towns and their topographical settings, it is possible to extrapolate several more observations.

The first of these is that the data show that the shapes of the areas occupied by small towns could be ovoid, elongated, or more complex. Despite these variations a basic distinction can be made between 'mononuclear' small towns like Le Broc and Charbonnier-les-Mines, and 'polynuclear' agglomerations like Blot-l'Église.

The form of small towns was also conditioned by watercourses and roads. Besides small towns that were structured by a large river (e.g. Les-Martres-de-Veyre and Montans), by a tributary of an important river (e.g. Varennes-sur-Allier) or by a confluence of two rivers (e.g. Vichy and Millau), we encounter agglomerations that were situated on the bank of a river (Rancon) and establishments whose layouts were not influenced by the presence of a nearby river (such as Le Broc, Pontarion and Castres). Small towns whose morphologies were shaped by rivers were to a large degree also characterised by the presence of manufacturing activities, in particular pottery production.

Many small towns were structured by roads. The morphologies of many small towns were shaped by a single-track road (as at Saint-Goussaud, Charbonnier-les-Mines and L'Hospitalet-du-Larzac), by a bridle-path (as at Saint-Gence), by a double-track crossroads (as at Voingt and Col de Ceyssat), or by an important crossroads (as at Varennes-sur-Allier, Vichy and Évaux-les-Bains). Other small towns also bordered a single-track road (Le Broc and Blot-l'Église), were at a double-track crossroads (Artonne) or situated at a major crossroads (Pérignat-sur-Allier), but their layouts were not shaped by these roads.

Roads were more important than rivers as structuring features and a dichotomy can be observed between towns crossed by a road and small roadside towns. A second dichotomy distinguishes small towns that were structured by a single road ('street-towns') from those structured by a crossroads. The former type is more frequent, but the second category includes the most urbanised towns and the important centres of pottery production.

by J. Trescarte, the significant risk of fire might help to explain the peripheral locations of workshops for the large-scale production of ceramics (Trescarte 2013).

8 Dynamics of the Regional Urban System

Using spatial analysis, we can examine the distribution of small towns in the territories and model their hypothetical spheres of influence. Applying a cost-distance analysis, it is possible to establish areas limited by a theoretical radius weighted by the factor of slope (Fig. 4.4).[29] For the purposes of this paper a radius of 25 km has been used.[30]

In the *civitas* of the *Arverni*, the Allier Valley emerges as the main axis of development. The Dore Valley, a basin enclosed by the surrounding mountains, emerges as another important development zone. In this valley the small town of Ambert occupied a dominant position.[31] The western half of the *civitas* had few substantial settlements and does not appear to have been structured by small towns. Large parts of this area remained outside the sphere of influence of the urban system.

The archaeological evidence for settlement is draped around the mountain, thereby highlighting the impact of topography on urban geography.

Among the *Vellavii*, where communication was limited by the rugged landscape, the territory east of the Loire remained completely outside the zones affected by the urbanised area of the *civitas*.

In the *civitas* of the *Gabali* we find two corridors marked by small towns, that of Javols-Nasbinals on the east-west road axis and that in the Lot Valley. Apart from these spaces, the rest of the territory of the *civitas* remained on the margins of the urban system.

A similar situation existed in the territory of the *Ruteni*, in which small towns were largely confined to the Aveyron Valley, in which the road runs parallel to the river, to the valley of the Tarn and to the road that connects with Millau to the south.

The *civitas* of the *Cadurci* was divided in two halves by the Lot Valley. The northern half of the *civitas* was devoid of small towns, while there is clear evidence of these agglomerations in the south, even more in the valley of the Lot.

29 In a publication dealing with the territory of the *Bituriges*, in which distances between sites ranged between 5 and 53 km, C. Gandini uses a radius of 5 km for the road stations and of 10 km for the agglomerations (and of 25 km for the 5 largest agglomerations), inspired by L. Laüt's work that uses circles of 20 km radius (Gandini 2006: 314–315). M. Monteil explains that the distance of 25 km was "arbitrarily defined as a maximum allowing an individual travelling on foot or using a cart to go to the city and come back in a day, at a rate of 5 km per hour" (Batardy et al. 2013).

30 Monteil 2012: 321.

31 Fassion 2011; Fassion 2013.

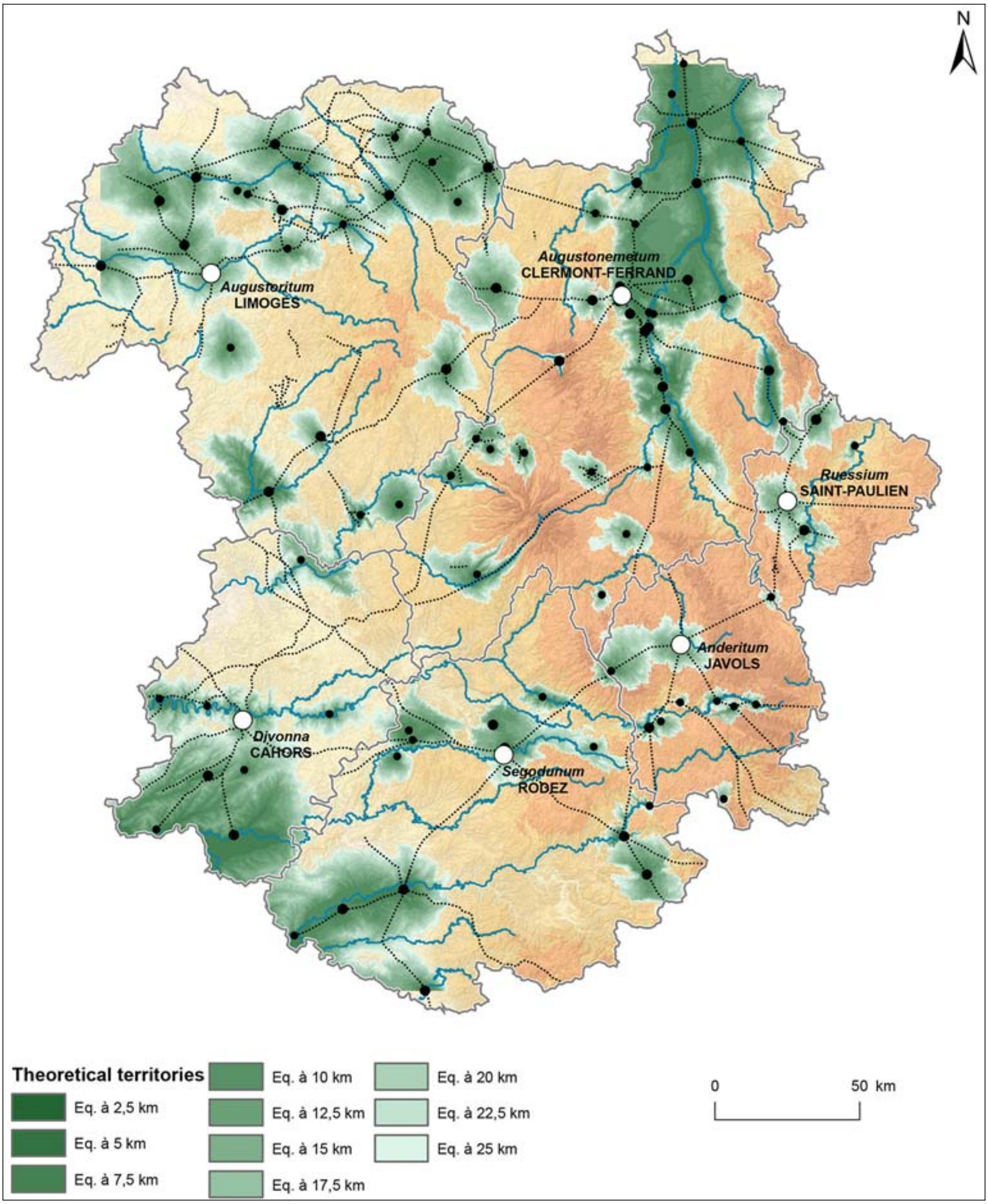

FIGURE 4.4 Map of the theoretical territories of small towns
GIS: F. BARET

Only the extreme north, which was in close contact with the territory of the *Lemovices*, seems to have fallen within the sphere of influence of the urban system.

A different pattern emerges for the *civitas* of the *Lemovices*. The northern part of the *civitas*, north of the Clermont-Limoges road, was completely integrated into the urban system, but south of this axis the borders of the *civitas* are marked by small towns. The central part of the territory is marked by a great emptiness. Nevertheless, it should be noted that this pattern is dependent on the state of research. Ongoing work on the rural establishments in this region has revealed the existence of other forms of settlement and developments on this tableland.

In conclusion, territorial analyses show the spatial distribution of small towns to have been uneven and irregular. Many of these small towns have yielded evidence of continuity with proto-historic settlements. Others were new creations of the Roman imperial period. Settlements in the latter category were the results of complex opportunistic happenings that did not give rise to regular spatial distributions.

9 Relations with the *Civitas* Capitals

The number of small towns that were located in the vicinity of the *civitas* capitals varies immensely. Around Clermont-Ferrand (*Augustonemetum*), within an easily accessible range, we find the bath-house of Royat/Chamalières and the theatre of Montaudoux in Ceyrat, both of which are assumed to have been surrounded by a grouped settlement. About 10 km to the east are the pottery production site of Cournon-d'Auvergne and the putative 'street-town' of Pérignat-sur-Allier. The area of influence that can be assigned to Clermont-Ferrand using a radius of 25 km is a corridor that is limited on the west by the chain of volcanic hills and on the east by the Forez Mountains. This corridor corresponds largely to the northern part of the Allier Valley. In addition to the sites already mentioned, but directly linked to the capital, the small towns of Martres-de-Veyre, Corent, Gergovie, Côtes-de-Clermont, Lezoux, Artonne and Courpière were situated in less accessible areas, at distances of between 3.5 km and 25 km as the crow flies. There can be no doubt that the alluvial plain bounded by the mountain ranges holds the highest density of roads and small towns, all of which were accessible in less than a one-day round trip from the capital. The other small towns were situated along the main roads.

Among the *Vellavii*, the *Gabali*, the *Cadurci* and the *Lemovices*, the situation was totally different. In these *civitates* no small town is recorded within the area

of influence of the capital. In the territory of the *Lemovices*, this state of affairs is best illustrated by the locations of the small towns closest to Limoges (*Augustoritum*), such as Saint-Gence or Cahors (*Divona*), but also embracing Luzech and Cajarc. Although the zones of influence of these agglomerations were in contact with the theoretical territory of the capital, they were not situated within this area. Spatial arrangements in the territory of Rodez (*Segodunum*) are closer to those found in the vicinity of Clermont. On the outskirts of the capital of the *civitas* of the *Ruteni* there was one small town, Onet-le-Château, with a large sanctuary and a thermal building. Farther to the north, in a less accessible area, the small town of Salles-la-Source was also provided with a sanctuary and a theatre. All the other small towns are located beyond the theoretical territory of the *civitas* capital.

In a nutshell, two antithetical situations can be identified. In the *civitates* of the *Lemovices*, the *Vellavii*, the *Gabali* and the *Cadurci*, no secondary settlement has been detected within the sphere of influence of the *civitas* capital, whose very existence seems to have blocked the development of such settlements. In contrast to this, in the territories of the *Arverni* and the *Ruteni*, we find small towns that were either very close to the capital or located near the edges of its theoretical territory. It should be noted that these small towns not only correspond to Iron Age *oppida* but also include most of the small towns with a high level of monumentality. In the case of Clermont-Ferrand, the spatial pattern has also been influenced by the peculiar topography of the Allier Valley, which opens up towards the north but narrows towards the south, and by the establishment of small towns dedicated to pottery production in close proximity to the central town. Examples include Cournon-d'Auvergne, Les Martres-de-Veyre and Lezoux, which also shared in the mineral wealth of the Limagne.[32]

10 Small Towns and Rural Settlements

The study of the role of urban networks in the rural economy and society also involves the analysis of the relationships between small towns and rural establishments. In the *civitates*, small towns are likely to have served as religious places or as venues for periodic or permanent markets, capable of absorbing agricultural surpluses and catering to the needs of rural populations. However, it is by no means easy to assess the frequency or intensity of exchanges between small towns and rural sites, and even more problems are posed by attempts to

32 Within the territory of *Augustonemetum*, the two sites of Royat/Chamalières and Montaudoux can be regarded as suburban extensions of the *civitas* capital. Cf. Trément et al., in this volume.

identify *villae*.[33] In spite of these difficulties, the study of the distribution of rural settlements around the small towns has revealed sharp contrasts in density. Thanks to the systematic field-walking undertaken by F. Trément, the idea that rural site densities were highest around the *civitas* capitals has been confirmed for the area around Clermont-Ferrand, but has to be qualified when we widen the scope of our inquiries to the areas surrounding the small towns.[34]

Areas of high population density are frequent in close proximity to small towns, for instance, between Vichy and Varennes-sur-Allier, in the triangle formed by Allanche, Massiac, and Saint-Flour among the *Arverni*, around Le Puy-en-Velay in the *civitas* of the *Vellavii*, around Montans and Albi in the territory of the *Ruteni*, and in the area surrounding Castelnau-Montratier in the *civitas* of the *Cadurci*. Among the *Lemovices*, high rural site densities have been observed around Tintignac, Ussel, Mainsat, La Souterraine and Ahun.

A juxtaposition of the maps of the territories of the small towns and those showing known *villae* reveals more complicated patterns. In the territory of the *Arverni*, the Allier Valley attracted the majority of the *villa* builders; in contrast in the *civitas* of the *Ruteni* the majority of *villae* were situated in the spheres of influence of small towns. In the territories of the *Lemovices* and the *Cadurci*, villas were more evenly distributed across the landscape. In these territories, many villas have been detected in areas marked by the absence of small towns, for instance, in the central part of the *civitas* of the *Lemovices* and in the areas to the north of the Lot Valley in the *civitas* of the *Cadurci*.

A lack of data makes it impossible to carry out a detailed case-by-case analysis of the relationship between small towns and rural establishments. However, there are some examples of small towns that do have a clear spatial association with a nearby *villa*, similar to the emblematic case of Bliesbruck/Reinheim.[35] Examples from the Massif Central include Charbonnier-les-Mines (*Arverni*),[36] Ahun (*Lemovices*)[37] and Le Puy-en-Velay (*Vellavii*).[38]

11 Small Towns and Rivers

The rivers and roads that connected the small towns to the central city and to each other played an important part in structuring the territory of the *civi-*

33 Hervé 2012: 43.
34 Gandini 2006: 317, and Monteil 2012: 325, confirmed by Trément 2011.
35 Petit et al. 1994.
36 Bet et al. 2015.
37 Pichon et al. 2013.
38 Vallat 2006.

tates. In the case of rivers, only those that served as axes of communication and exchange within and between *civitates* will be mentioned.

Distances between small towns and rivers vary between 0 and 21 km, with an average of 5 km. Some 25% of the small towns were located within 500 m of a large river and 50% within a distance of 2 km. On the basis of these data, close proximity to a river cannot be identified as a major factor in deciding the implantation of the majority of small towns.

Nevertheless, the analysis of the distribution of small towns along rivers highlights the fundamental importance of two rivers in the structuring of the territories of the *Arverni*, the *Gabali* and the *Cadurci*. In the territories of the *Arverni*, we find 12 small towns on the banks of the Allier. These towns include centres of pottery production as well as a small number of other centres characterised by a high level of urban development. The origins of this configuration can be traced back to the Iron Age, when the most important *oppida*, such as Corent and Gondole, were situated in the Allier Valley. Its persistence confirms that the valley played a very important part in structuring settlement patterns in the *civitas* of the *Arverni*, not only those of the rural settlement but also those of the small towns.

In the territories of the *Gabali* and the *Cadurci*, the Lot Valley seems to have played a similar role. Despite the fact that only some sections of the Lot were flanked by Roman roads, more than 50% of the small towns that have been identified in these territories were situated in this valley, some of them near river crossings.

Between them the Allier valley and the Lot Valley contained about 24% of the small towns of the Massif Central.

12 Small Towns and Roads

As we have much less information about Roman roads than about rivers, it is impossible to analyse the connections between small towns and roads on the level of individual sites. Under these circumstances, the relationships between town-like agglomerations and roads can only be explored by examining the settlement patterns and road systems of entire *civitates*. Even a very general exercise of this type is enough to reveal that the importance of roads varied from one region to another.[39]

39 Desbordes 2010; Trintignac et al. 2011; Gruat et al. 2011; Pisani 2011b; Dacko 2016.

The road network of the *civitas* of the *Arverni* has been more thoroughly investigated than those of the other *civitates* of the Massif Central.[40] With very few exceptions, the small towns of this *civitas* were serviced by the main axes of the road network. An important crossroads existed at Clermont-Ferrand, the capital, with another at Varennes-sur-Allier, in the northern part of the territory. The small town of Vichy was located at a less important crossroads.

Small towns were often established near bifurcations of Roman roads, but the absence of a small town at the point where the Clermont-Bordeaux road bifurcated from the Clermont-Limoges shows that this was not always the case.[41] Although the main axes are punctuated by small towns, no regular pattern seems to emerge. The north-south axis that crosses the *civitas* along the Allier Valley is lined with 13 towns, at variable intervals. The east-west axis is flanked by 7 small towns (Courpiere, Lezoux, Pérignat-sur-Allier, Cournon-d'Auvergne, Chamalières, Col-de-Ceyssat and Voingt). Their spatial distribution is completely irregular. The remaining main axis is the road that connects Clermont to Cahors via Le Mont-Dore, Ydes, and Mauriac. The other roads are flanked by only one or two small towns. It follows from this discussion that the *civitas* was not characterised by a regular mesh of small towns along the roads. Both the urban network and the road system were polarised around the capital, leaving vast spaces empty. Only the northern part of the territory (in the present department of Allier) offers a denser and more regular urban framework. This pattern is conditioned by the regional topography. The small towns benefited from the richness of the Allier Valley and the surrounding plains.[42] In the peripheral parts of the territory, only a few settlements were established on the main roads, and these must have earned their livings from travellers and long-distance trade.

In the *civitas* of the *Lemovices*, the data currently available point to the existence of an important network in the north, while the southern districts were crossed only by the Clermont-Bordeaux road.[43] The spatial distribution of the small towns tallies with this supposition, with 17 settlements in the north against only 6 in the south. In this *civitas*, the Clermont-Bordeaux road connects only 3 small towns (Ussel, Tintignac, and Brive-la-Gaillarde), the others were less well served or were even situated outside the network known at present. In contrast to their situation, the small towns in the northern half of the territory were invariably located on a road or at a crossroads. However,

40 Dacko 2016.
41 Dacko 2013: 119.
42 Trément 2013.
43 Desbordes 2010; Desbordes 1995.

the main road that runs from Clermont to Saintes via Limoges serves only 4 towns (Ahun, Pontarion, Sauviat-sur-Vige and Chassenon) and the capital. The majority of the settlements were located north of this road and not aligned along it. However, the other side of the coin is that some of these settlements were located at a crossroads and on important axes of travel and communication. Examples include Évaux-les-Bains, which was situated at a road node that linked the neighbouring *civitates* of the *Arverni* and the *Bituriges Cubi*, and La Souterraine, which had very good connections to the capital and also to the neighbouring *civitates*. Finally it should be noted that several small towns, such as Ahun, Rancon, Le Grand-Bourg and Pontarion, were situated at both a crossroads and at a confluence of rivers. Generally speaking, the northern part of the *civitas* of the *Lemovices* had a much more developed road system and a much denser urban system, leaving only a few areas unoccupied, but the central region of the *civitas* was devoid of small towns.

13 Conclusion

In the Roman imperial period, the Massif Central did not have any regular urban system. Instead, an examination of the archaeological and epigraphic evidence from the *civitates* of this region reveals the presence of a variety of spatial patterns and the existence of vast empty spaces that were devoid of any small towns and were sometimes bypassed by the major roads. Spatial analysis based on the hypothetical territories of the agglomerations illustrates this pattern very clearly, as does the study of the relationships between the agglomerations and the road network. On the level of the study area as a whole, three major roads can be identified: the Lyon/Saintes road via Clermont and Limoges, along which 10 small towns were aligned, the Lyon/Agen road via Saint-Paulien, Javols, Rodez and Cahors, which was lined with 5 or 6 small towns, and finally the north-south axis running through the territory of the *Arverni*, along which at least 12 small towns have been identified.

These observations imply that the settlement systems in the Massif Central were not the brainchildren of Roman administrators and implemented in top-down fashion. Instead, many elements of the spatial configurations that existed in Roman imperial times can be traced back to proto-historic patterns of settlement. In addition, the topographic peculiarities of the different *civitates*, brought into even sharper relief by various economic divergences, resulted in a rich mosaic of regional-specific patterns. Despite its experimental and provisional nature, the classification of agglomerations attempted in this paper displays this variety perfectly. We can be certain that some of my classifications

will have to be revised as new evidence comes to light, but such revisions are not expected to alter my reconstruction of major trends. Future research will unquestionably allow us to achieve a much better understanding of the origins, nature and evolution of individual sites and enable a much more sophisticated interpretation of both synchronic patterns and diachronic trends.

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CHAPTER 5

Towns, Roads and Development Dynamics in the Territory of the *Arverni* in Roman Times (Auvergne, France)

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1 Introduction

The purpose of this paper is to examine the relationship between road networks, small towns and regional development in the territory of the *Arverni* during Roman times. It is based on data acquired in the framework of the DYSPATER programme, which sets out to model the dynamics of territorial development in the Massif Central region of France from the Iron Age to the Middle Ages.[1] This programme has recently been supplemented by several doctoral research projects, including that of Marion Dacko[2] on the ancient road network in the *civitates* of the *Arverni* and the *Vellavii*, and that of Florian Baret[3] on secondary agglomerations in the Massif Central. Several other doctoral dissertations, already defended[4] or still work in progress,[5] as well as a series of discoveries made during properly planned archaeological investigations or while carrying out rescue excavations have helped to round off this completely renewed overview of the organisation of the territory of the *Arverni* in Roman times.

One of the major results of this research has been to show major disparities in the levels, pace and modalities of development that can be observed in various geographical areas.[6] To try to account for these differences, it was considered the best plan was to use the 'core/periphery' model developed by John Friedmann and his typology of regional development.[7] This model shows how

1 Trément 2011–2013.
2 Dacko 2016.
3 Baret 2015.
4 Ducreux 2013; Fassion 2013; Trescarte 2013; Massounie 2015.
5 Augustin in progress; Calbris in progress; Delpy in progress.
6 Trément 2010; 2013a; Trément and Carvalho 2013; Trément et al. 2014.
7 Friedmann 1966.

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and why different parts of a territory develop at different rates, and how they evolve over time as a function of spatial interactions.[8]

Its application to the territory of the *Arverni* in the period corresponding to the Early Empire reveals four areas of unequal development on the regional level (Fig. 5.1): a 'core region': the Clermont Basin and the Limagne Plain; an 'upward-transition region': the Allier Valley; 'low-development areas': the peripheral uplands; and, within the latter, 'peripheral sectors open to development', that will be called 'integrated margins'.[9]

2 The Clermont Basin and the Grande Limagne Plain: A 'Core Region'

During the late Iron Age and the Roman era the Clermont Basin and the Grande Limagne Plain exhibited the criteria that characterise a 'core region' in Friedmann's typology, not only because of their geographical situation in the heart of the territory of the *Arverni*, but above all on account of the convergence of major roads, the concentration of political power, population, economic activities and, on a more general level, wealth (Fig. 5.1). Although this area accounted for a relatively small proportion of the city's territory (about 5%), it was by far the most densely populated zone and the seat of the most important urban centre, *Augustonemetum* [14],[10] the administrative chief town in which the municipal elite resided. A wide range of economic activities were concentrated in this space, in particular the most important pottery production workshops (Lezoux [17], Les Martres-de-Veyre [22]). It also contained the majority of the villas that have been recognised in the territory of the *Arverni*, notably almost all the higher-ranking villas.[11] Much of the economic activity involved high value-added products requiring significant investment (vegetable crops, viticulture, ceramics).

The widespread diffusion of the *terra sigillata* ware produced in Lezoux and the saturation of the regional market with the production of the various workshops suggest that these investments generated significant profits. The research conducted by Jérôme Trescarte[12] shows the surprising capacity for innovation on the part of Arvernian potters from the end of the Iron Age. In the lower part of the Allier Valley and its alluvial plain, in which the main centres of

8 Trément 2014.
9 Some examples of these are identified in green on the map in Fig. 5.1.
10 The numbers in square brackets refer to the numbering of the agglomerations in Fig. 5.1.
11 Dousteyssier et al. 2004; Dousteyssier and Trément 2007.
12 Trescarte 2013.

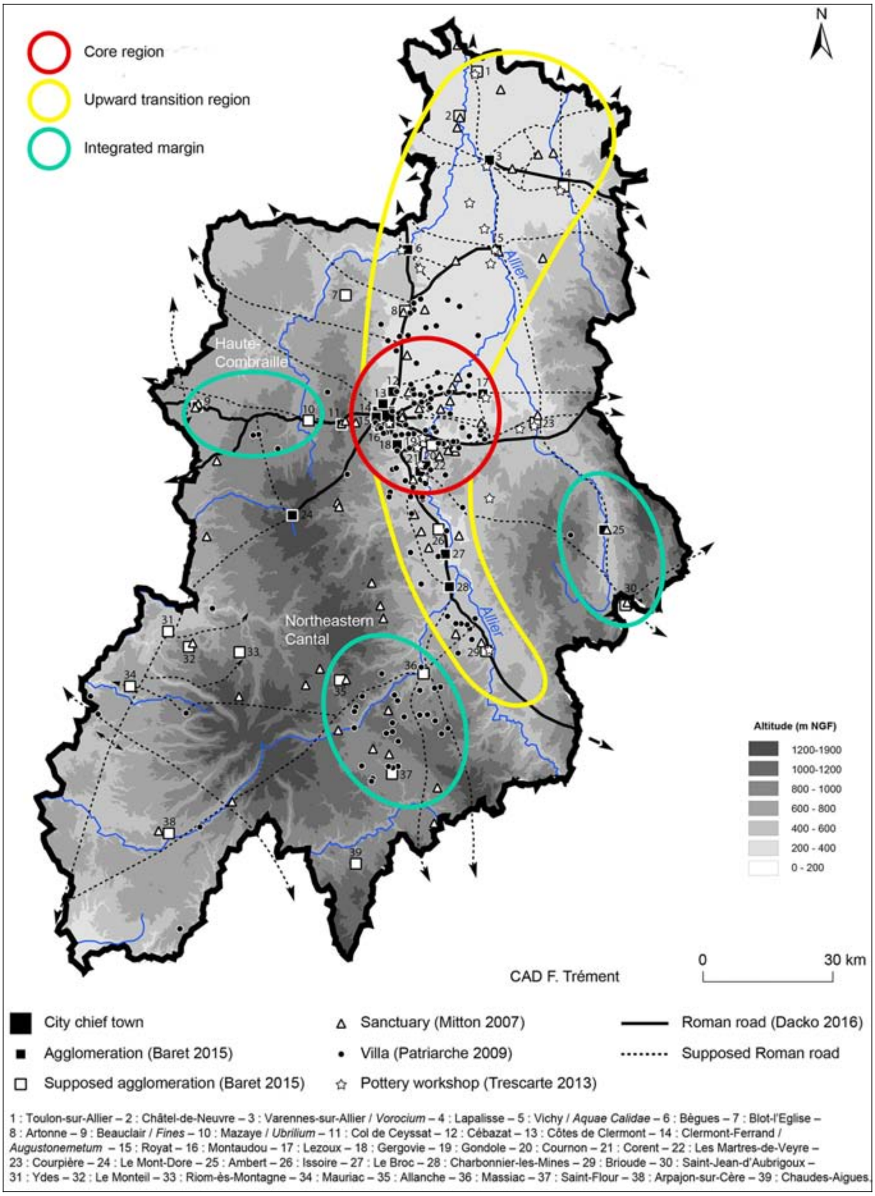

FIGURE 5.1 Modelling of regional dynamics of development in the territory of the *Arverni* in the Early Empire
CAD: F. TRÉMENT

power and population of final La Tène developed, we notice the early rise of an organised pottery manufacture inspired by both indigenous tradition and Roman imports. This development, which stimulated the production of new high-quality ceramics, began as early as the mid-first century BCE. The proliferation of workshops and the early dissemination of their increasingly standardised products are indicators of networking by the potters responsible for this production.

Far from causing any interruption to the Arvernian potter's craft, the Roman conquest was followed by an expansion in the number of workshops, initially along the north-south axis which was the main corridor for the circulation of people and goods and in which we find most centres of consumption, that is to say, most of the agglomerations that developed in this period. In the first century CE these workshops quickly adapted to the new standards required for manufacture of large-scale ceramics, integrating the production of standardised ceramics on an expanded scale, especially the manufacture of *terra sigillata*.

This capacity for innovation, that is one of John Friedmann's core-region features, is also found in other fields, the most spectacular example being the early implementation of drainage techniques that shaped the landscape on a large scale.[13] We could also mention the famous temple of Mercury built on top of the Puy de Dome or the passage in Pliny the Elder mentioning the visit of the famous Greek sculptor Zenodoros, who was commissioned by the *Arverni* to erect a colossal bronze statue of this same god.[14]

In this space dominated by the chief town of the *civitas* [14], the identification of secondary agglomerations has been a problem of long date. Before the late 1990s only one such agglomeration had been found, at Les Martres-de-Veyre [22], about 15 km south of Clermont, on the banks of the Allier River.[15] However, between 2000 and 2010 several new agglomerations were discovered. The excavations carried out at the Col de Ceyssat [11], about 10 km west of Clermont, revealed an important roadside settlement and religious complex. Its location, at an altitude of between 1,000 and 1,250 m, is explained both by the trajectory of the Agrippa road, which connects Lyon and Saintes via Clermont and Limoges, and by the presence of the temple of Mercury at the top of the Puy de Dôme.[16]

The existence of an agglomerated habitat has also been hypothesised in connection with the Montaudoux theatre [16], located 2 km south-west of Cler-

13 Trément ed. 2007; Trément 2012.
14 Plin. *NH* 34.18.45–47.
15 Romeuf 2001.
16 Trément 2003; 2013b.

mont, at which the latest discoveries have revealed buildings extending around the spectacular edifice and its sanctuary, following an orientation imposed by the stage wall.[17] Moreover, the excavations carried out at the sites of the three *oppida* of Corent [21], *Gergovia* [18] and Gondole [19] have shown a continuity of occupation during the Roman period, in a form that can be compared to that of fully fledged secondary agglomerations.

In Corent [21], the latest excavations carried out around the sanctuary and the Roman theatre suggest that the agglomeration of the Early Empire was less important than that of the Second Iron Age.[18] In *Gergovia* [18] excavations carried out since the eighteenth century have revealed the presence of a large sanctuary of the Early Empire as well as traces of domestic quarters and craft activities from the first half of the first century CE. Remains of roads have also been discovered, but as yet not enough is known about the dispersion of archaeological features on the plateau to allow us to reach an adequate understanding of the morphology of this agglomeration.[19] In Gondole a potters' quarter extended over about 40 hectares in the second half of the first century BCE. This area was situated outside a monumental rampart that marked the boundary of a regular centre of habitation covering approximately 30 hectares. Unfortunately, the evolution of occupation after the beginning of the first century CE is still poorly understood.[20] On the site of Les Côtes de Clermont [13], the excavation of a monumental complex composed of at least one temple and its ancillary buildings and the presence of an artisanal district and domestic units to the south suggest the existence of a settlement of the Early Empire on the hill that dominated the chief town of the *civitas*.[21] In Lezoux [17], the 2002 discovery of a putative 'arena building' in the centre of the town also raises the question of the existence of an agglomeration.[22] Finally, recent research has revealed the existence of a small agglomeration at a crossroads 6 km north of Clermont-Ferrand, in the commune of Cébazat [12], prior to the development of the economic activity area of Les Montels III.[23] Here the remains of a Gallo-Roman *fanum* were discovered. This sanctuary was the successor to a proto-historic place of worship and was situated along an ancient east-west road. In the western part of the area investigated, several structures that were

17 Dartevelle 2010; Dartevelle and Le Barrier 2016: 545 and 551.
18 Poux ed. 2015; Poux and Demierre 2016.
19 Garcia 2008; 2009; 2013; Jud 2016.
20 Deberge et al. 2009.
21 Clémençon and Fauduet 2003.
22 Baucheron 2002a; 2002b.
23 Delhoofs 2015.

used as dwellings and workshops as well as a complex hydraulic network have been discovered. These features extended along a path that was at right angles to the main road, over a distance of 150 m. To the north, a vast necropolis for cremated remains marks the limit of this small hamlet. The remains of a Roman villa have been identified by INRAP only 200 m to the east.

From the point of view of the urban and economic geography of development, this proliferation of certain or probable secondary agglomerations within a radius of a dozen kilometres from the main town does present some problems. An analysis of the archaeological data available, however, does offer some elements that help to shed some light on the situation. Among the ten agglomerations identified, three sub-categories can be distinguished (Fig. 5.2):

A few settlements were situated within a radius of 2 km from the chief town [14] and seem to have functioned as a kind of physical extension of it. Examples include the thermal baths of Royat [15] and the theatre of Montaudoux [16], both of which may be regarded as integral parts of the capital's suburbs.

A second category of agglomerations is made up of the major sites from the end of the Iron Age that continued to function into the early years of the imperial period. The *oppida* of Les Côtes de Clermont [13], *Gergovia* [18] and Gondole [19], located at distances of 3, 7, and 11 km from the central city, spring to mind. Recent excavations have tended to show that the occupation of these sites during the Roman period was either of short duration (as in the case of Gondole) or on a limited scale. To judge from the evidence currently available, the latter scenario also seems to apply to Les Côtes de Clermont and *Gergovia*. Their proximity to the chief town could explain why these sites were not able to develop significantly after the beginning of the first century CE.

The third category of agglomerations is composed of those settlements whose development benefited from a sufficient distance from the capital. A good example is the site of Les Martres-de-Veyre [22], which was located on the banks of the Allier at a distance of 14 km. This agglomeration seems to have been closely connected to the *oppidum* of Corent [21], which remained an important centre during the Roman period. Another illustration is the road settlement and religious complex of the Col de Ceyssat [11], which was located about ten kilometres to the west of *Augustonemetum* (Fig. 5.2). Another member of this category is the pottery complex of Lezoux [17], located 23 km to the east of the capital, on the edge of the Limagne Plain.

Despite the systematic surveys carried out over the last twenty years, no secondary agglomeration has been detected in Limagne des Marais, an ancient swamp area that extends over a large proportion of the eastern and north-eastern parts of the Clermont Basin. In this area villas seem to have dominated the countryside and as yet there is no evidence of secondary settlements. The

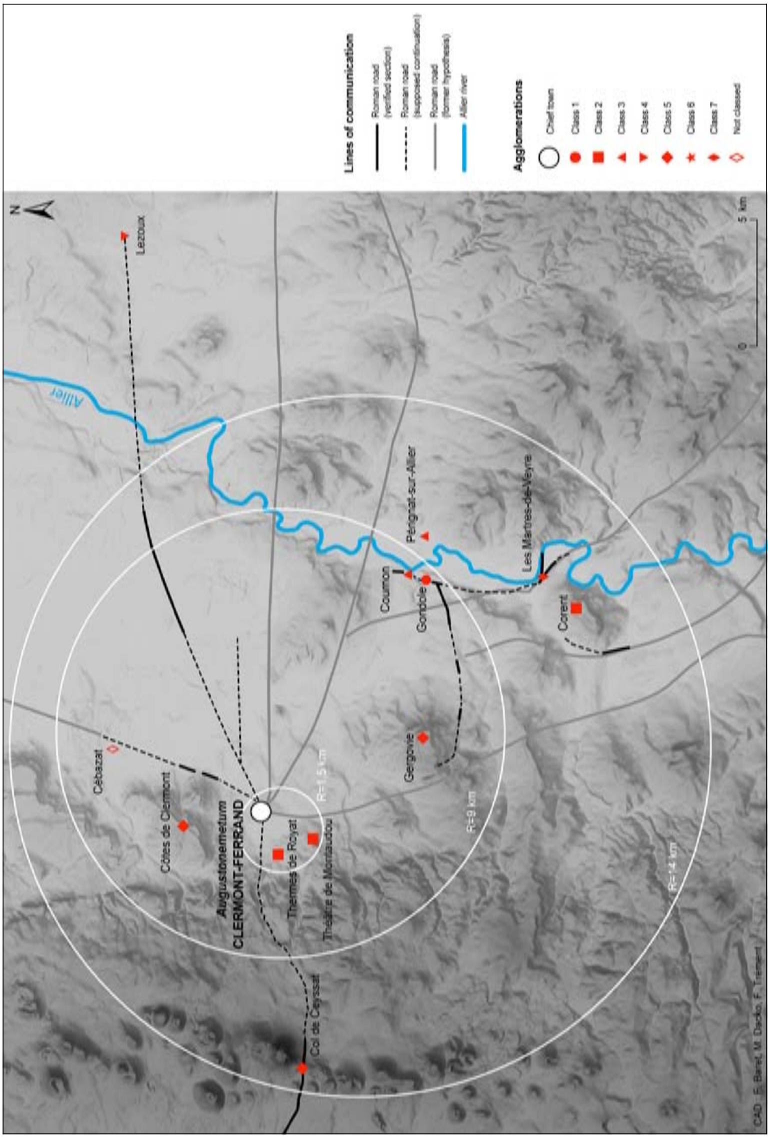

FIGURE 5.2 The Clermont-Ferrand basin in the Early Empire: agglomerations and roads
CAD: F. BARET, M. DACKO AND F. TRÉMENT—TYPOLOGY OF AGGLOMERATIONS FROM BARET 2015

recent discovery of the small agglomeration of the ZAC des Montels III in Cébazat [12] does not necessarily contradict this model, insofar as it might have been just a road station/staging post. Admittedly, the plan showing the excavated remains does not support this interpretation but even if we are not dealing with a road station, this small agglomeration might well have depended on the villa located immediately to the east.[24]

From an urban-geographical and historical point of view, the Clermont Basin and its surroundings present a very specific case, whose complexity is particularly attributable to the concentration in a small space of several major sites at the end of Iron Age. Geographical analysis taking into account their forms and functions is an essential tool in the interpretation of this network of agglomerations and their dynamics. As we have explained, the spacing of the various sites seems to have played an essential role in the regulation of an urban network largely inherited from the Iron Age, but deeply disrupted by the foundation of the chief town of the *civitas*.

Knowledge of the road network in the Clermont Basin is unfortunately still fragmentary.[25] While it is logical to assume that the capital was located at the convergence of long-distance roads linking it to the neighbouring cities, these major axes have so far been poorly served by the archaeological record. Paradoxically, some of the secondary roads are better known, such as that linking the main town to the agglomeration of Lezoux [17]. We are particularly well informed about the network of 'minor roads' between the urban centres of Corent [21], Les Martres-de-Veyre [22], *Gergovia* [18] and Gondole [19]. The bulk of the construction of these axes can be dated to the end of the La Tène period (La Tène D2: 70–30 BCE) and to the Augustan period,[26] and seems to have been contemporaneous with a phase of restructuring at the sites of Corent and *Gergovia*.

Furthermore the Allier River also seems to have played an important role in the development of the network of agglomerations. This observation, that is already pertinent to the end of the Iron Age, also applies to the Roman period. Most of the pottery production centres in particular are located directly on the banks of this river, usually at a crossing point, allowing the transport of ceramics by river and land. This is the case, for example, in Les Martres-de-Veyre [22][27] and Les Queyriaux in Cournon [20].[28] The pottery complex of Lezoux

24 Delhoofs 2015.
25 Dacko 2016.
26 Deberge et al. 2014.
27 Romeuf 2001.
28 Bet et al. 1998.

[17], which was situated at a distance of 7 km from the Allier, forms an obvious exception to this pattern. It is believed to have been directly connected to *Augustonemetum* [14] by a secondary road. Traces of this road have been discovered on the left bank of the Allier. There are strong grounds to think that a loading berth was situated at the locality of L'Éguille, in the municipality of Culhat.[29] It is there, in a place called Saint-Martin-de-l'Aiguille, that J. Corrocher locates the port of Lezoux. Preliminary surveys carried out by G.B. Rogers have revealed the presence of large amounts of *terra sigillata* pottery, lending support to the idea that L'Éguille might have been the site of a warehouse and a loading berth.[30]

Thanks to the discovery of a cargo of *terra sigillata* ware dating from the second century CE between Vichy and Bellerive-sur-Allier in 1964, we know that some of Lezoux's production was transported by river.[31] During the Early Empire, the establishment of workshops in rural areas, along the Allier, the Loire and their respective tributaries, moving farther and farther away from major urban centres, seems to confirm that these rivers were used for the transport of ceramic products.[32]

The quality of the traditional tableware production and 'pre-sigillata ware' was already famous in the first century BCE, and this reputation could have influenced the decision to turn Lezoux into the most important centre of ceramic production in the Three Gauls.[33] Being situated in the centre of the equilateral triangle formed by the Allier River to the west, the Dore River to the east, and the Agrippan Way (*Via Agrippa*) to the south, at a distance of less than 10 km from each of these transportation axes, Lezoux was ideally located for investors eager to develop a mass production targeting distant markets. Pertinently, the large quantities of wood needed for firing the kilns could be transported from Livradois and Forez by floating them along the Dore River.[34] The ceramics produced could be exported to the north via the Allier (with the port of L'Éguille operating as loading berth) and perhaps also via the Dore. The goods could be carried to destinations in the north or south along the *Cessero-Augustonemetum-Avaricum* road and towards the east and west along the Agrippan Way. The development of the large pottery production centre of Lezoux [17], slightly off the traditional north-south axis constituted by the

29 Trescarte 2013: 390; Dacko 2016.
30 Provost and Mennessier-Jouannet 1994: 89.
31 Corrocher 1977; 1980: 62–64; 1981: 89; Bet and Vertet 1986: 138.
32 Trescarte 2013: 388.
33 Trescarte 2013.
34 Trément et al. 2014.

Allier Valley, strongly suggests that by late-first and early-second century CE land routes complemented waterways as conduits for the transportation of mass-produced mode C *sigillata*, or even competed with such watercourses.[35]

3 The Allier Valley: An 'Upward Transition Region'?

The Allier Valley can be regarded as an 'upward transition region', characterised by its peripheral position (although it borders on the Grande Limagne Plain), by its fertile soils advantageous to agriculture and by the availabilty of a partially navigable waterway. A north-south road that was lined by a string of regularly spaced agglomerations ran parallel to the river. Although the valley represents only about 10 % of the territory of the *Arverni*, it contains 11 of the 39 agglomerations that have been identified to date, i.e. almost one-third (28 %).[36]

In the southern part of the valley, the alignment and the regular spacing of several agglomerations,[37] as well as Late Roman sources referring to a road linking Clermont and Brioude,[38] encourage us to connect the few stretches so far discovered and to reconstruct a road running along the left bank of the Allier (Fig. 5.1).[39] If we exclude Brioude [29], which remains very poorly known for the Early Empire but is attested as *vicus Brivatensis* during the Merovingian period,[40] the first agglomeration, 17 km farther to the north, is Charbonnier-les-Mines [28]. Located at a distance of about 42 km as the crow flies from the chief town of the *civitas*, this settlement occupied an area of about 35 hectares, making it the most important agglomeration to have been identified in this area.[41] Its plan was entirely conditioned by the layout of the road that traverses it along a north-south axis. This central road was crossed by a series of alleys at right angles to it, which were lined with *insulae* containing domestic units. The settlement also had a double *cella* sanctuary beside the road to the north of the site.

35 Trescarte 2013.

36 If we add the 11 agglomerations of the Clermont Basin (see above), no fewer than 22 certain or possible agglomerations have been identified in the part of the Allier Valley belonging to the *civitas* of the *Arverni*. These 22 agglomerations represent 58 % of all agglomerations in the territory of the *Arverni*, in a space representing only 15 % of its area. Of course, this imbalance is partly attributable to the fact that the flat and hilly areas have been investigated with greater intensity than the mountainous districts.

37 Baret 2016.

38 Sidonius Apollinaris, *Carmen* 24; Gregory of Tours, *De gloria martyrum* 2.24–25.

39 Dacko 2016.

40 Fournier 1962. Cf. Gregory of Tours, *Liber de passione et virtutibus sancti Juliani* 16–17.

41 Dousteyssier 2007; 2009; Bet et al. 2014.

Along the same road, 7.5 km farther to the north, a second agglomeration has recently been recognised in the Blanède Plain, in the commune of Le Broc [27], at a distance of 200 m from an inscriptionless milestone.[42] This agglomeration had a *fanum* whose *peribolos* is one of the largest in Gaul. Moving another 6 km to the north, the Merovingian *vicus* of *Iciodorensis*,[43] present-day Issoire [26], has yielded a few traces of Early-Imperial occupation but they are not sufficient to permit the identification of an agglomeration.[44]

The construction phases of this medium-distance road axis are still poorly understood, particularly because of the small number of stratigraphical observations. Any epigraphic data that might be associated with it are also largely lacking, as one of the two milestones that have been found along its trajectory is late, while the other has no inscription.[45]

The area to the north of the Clermont Basin and the Grande Limagne Plain appears to have been characterised by a very different sort of organisation of its network of agglomerations (Fig. 5.1). While the agglomerations in the southern part of the Allier Valley are aligned along a main axis, constrained by the relative narrowness of the valley, the fairly level relief of the plain to the north is much less restrictive. This geomorphological contrast is reflected in a different spacing of agglomerations, most of which are situated at crossroads on major axes, in particular those linking the chief towns of the neighbouring cities.

Among the agglomerations in the northern plain, Vichy [5] has been identified with the *Aquae Calidae* of the Peutinger Map. It was situated 46 km north of Clermont [14], about the same distance that separated the latter city from the agglomeration of Charbonnier-les-Mines [28] in the southern part of its territory (Fig. 5.1). In the Early-Imperial period Vichy, which succeeded the *oppidum* of Cusset, is thought to have occupied up to 50 hectares.[46] Therefore it can be assigned the second rank in the settlement hierarchy of the *civitas* of the *Arverni* (just behind *Augustonemetum*).

Despite the presence of a ford and a wooden bridge, one of whose piles has been dated to around CE 30,[47] Vichy's specific role as a road junction is still poorly understood, not least because archaeological observations relating to the peripheral areas to the northeast and east of the agglomeration are either

42 Dousteyssier 2013; Baret 2013.
43 Gregory of Tours, *Liber in Gloria Confessorum* 29–30.
44 Mondanel 1982; Provost and Mennessier-Jouannet 1994.
45 Dacko 2016.
46 Corrocher 1981.
47 Troubat 2007.

old or very localised. The agglomeration itself unquestionably did undergo an important urban development. Not only did it boast several streets, the largest of which corresponds to the current axis of Rue Callou and Victoria Avenue, it was also endowed with sewers, aqueducts and lead pipes, not to mention perhaps two hypothetical *castella divisoria*. Information contained in the older documentation refers to columns, pilasters and capitals, suggesting the existence of monumental buildings.[48] A study of the metal artefacts carried out by Aurélie Ducreux strongly suggests the presence of elites in this agglomeration,[49] a conclusion that is supported by epigraphy.[50] A vignette on the Peutinger Map depicts a bath complex. Three hot springs were channelled and equipped with basins, and various objects relating to the therapeutic use of water, such as cups, medical equipment, and *ex-votos* have been discovered. In addition, there are many indications of diversified craft activities, including ceramic production, iron- and bronze-smelting, bronze and perhaps also silver smithing, woodwork, bone working, and stone work/masonry. The port district on the river, which remained in operation until the nineteenth century, has yielded ancient wooden piles that probably supported either a loading berth or a warehouse.[51] The reinterpretation and the mapping of the data will make it possible to characterise this important Gallo-Roman agglomeration with greater insight and to clarify its position in the regional network of agglomerations.[52]

Twenty kilometres to the north of Vichy, the agglomeration of Varennes-sur-Allier [3] succeeded a grouped settlement of the third and second century BCE. In Early-Imperial times this agglomeration occupied an area of about 25 hectares at which at least three roads, which were identified with the help of aerial photography, intersected (Fig. 5.1).[53] On the Peutinger Map it appears as *Vorogium*. Like Vichy, Varennes was endowed with a wooden bridge that allowed the Allier River to be crossed, of which several piles have been dated to the second and third century CE.[54] It also presents a wide variety of craft activities, such as the production of ceramics, iron and bronze metallurgy, bone-

48 Augustin in progress.

49 Ducreux 2013.

50 See in particular *CIL* XIII, 1499 / *ILA* 86 (funerary stele of Lucius Fufius Equester, soldier of the 17th cohort of Lyon); *CIL* XIII, 1500 / *ILA* 87 (cippus of Sextus Cervius Maius, Roman citizen); *CIL* XIII, 1501 / *ILA* 88 (cippus of Caius Julius Cantussius [?], Roman citizen?).

51 Corrocher 1981: 98–99.

52 Augustin in progress.

53 Dacko 2016.

54 Bergeron and Blanchet 1990.

working and lime kilns.[55] The role of this agglomeration in the development of the surrounding countryside is suggested by the presence of six villas and by a high density of rural settlements. These indications show that Varennes-sur-Allier took its place as a second centre of development in the area to the north of the Allier Valley, alongside Vichy.

It should be noted that evidence of the manufacture of ceramics has also been detected in other agglomerations in this part of the *civitas* of the *Arverni*, for instance, in Toulon-sur-Allier [1], 20 km north of Varennes. The discovery of remains of wharves on the banks of the Allier and the Loire has been linked to the marketing of ceramics produced in this area. A little upstream from Vichy, in Bellerive-sur-Allier (Terre-Franche), the remains of a landing stage and sherds of *terra sigillata* have been spotted in the bed of the Allier.[56] According to L. de Feraudy and H. Vertet, the boats laden with *sigillata* that came from Lezoux [17] and Vichy [5] and passed in front of the workshops of Toulon-sur-Allier farther north [1], could discharge some of their production here.[57] Near the workshop of Coulanges, which was located on a low terrace of the Loire, a deposit of vases and the foundations of sheds have been detected at the river's edge. These traces have been interpreted as pointing to the existence of a loading berth for ceramic products.[58]

In the northern part of the *civitas* of the *Arverni*, several medium-distance routes seem to have been improved in the first half of the second century CE.[59] The milestone of Biozat, which was erected in the years 120–121 CE, presumably along the 'Clermont-Vichy' axis, is contemporary with the date of felling of one piece of timber in the wooden bridge of Varennes-sur-Allier [3],[60] on the boundary between the territories of the *Arverni* and the *Bituriges*.[61] It is, however, difficult to know if these works bear witness to the construction of sections of this road or only to their repair.

55 Lallemand 2005.
56 Vauthey and Vauthey 1986: 157.
57 De Féraudy and Vertet 1986: 155.
58 Vertet 1980: 24.
59 Dacko 2016.
60 In 123 CE (Blondel et al. 2013: 42).
61 At the border between the city territories of the *Arverni* and the *Aedui*, the wooden bridge at Chassenard, on the Loire, has also yielded pieces of timber whose felling dates range between 2 BCE and CE 137 (Steinmann et al. 2011: 64). The analysis of other samples could make it possible to specify whether the work carried out on this crossing structure was contemporaneous with work conducted near the agglomerations of Varennes-sur-Allier and Vichy.

4 The Peripheral Uplands: 'Low-development Areas' and 'Integrated Margins'

Let us now turn to the mountains that cover the greater part of the *civitas* of the *Arverni*. These mountainous areas directly border the plains on all sides without any zone of transition, a geological consequence of tertiary collapse basins whose borders are set by steep fault lines. Although on the whole the peripheral upland areas were less dynamic than the Allier Valley and the Limagne Plain, they did provide the inhabitants of the latter areas with essential resources (Fig. 5.1). However, observations made to do with two well-researched subregions, namely Haute-Combraille and North-Eastern Cantal, caution us to be wary of making any generalisations.

4.1 *The Region of Haute-Combraille*

The region of Haute-Combraille is crossed from east to west by a major road, the Lyon-Saintes branch of the Agrippan network, that linked *Augustonemetum*/Clermont with *Augustoritum*/Limoges, the chief town of the *Lemovices* (Fig. 5.3). Archaeological surveys and excavations have made it possible to reconstruct the trajectory followed by this road over a distance of about 50 km.[62] Near Gelles and Prondines, this route was joined by a second axis whose route between Gelles and Ussel is well established. The evidence at present available prevents us from following this road beyond Ussel but according to the historiographical tradition it ran all the way to Bordeaux, via Périgueux. These two road axes have similar morphological characteristics. Long sections of both routes consist of *agger* roadways, bearing witness to extensive earthworks and suggesting that their construction must have been very expensive. Examining the stratigraphy of the Agrippan Way, road-markers and the chronologies of the roadside settlement occupations suggest that its construction took place during the Augusto-Tiberian period. However, because the road between Clermont and Ussel has not yet been securely dated, the chronological relationship between the two roads cannot be established.

The surveys carried out by Guy Massounie in the area traversed by these roads have revealed an unexpectedly dense pattern of Roman occupation (Fig. 5.3).[63] No fewer than 126 sites and site indications have been identified, most of which can be dated to the Early Empire. A dozen of these sites seem to correspond to villas. More research is needed to identify the nature of most

62 Dacko 2016.
63 Massounie 2015.

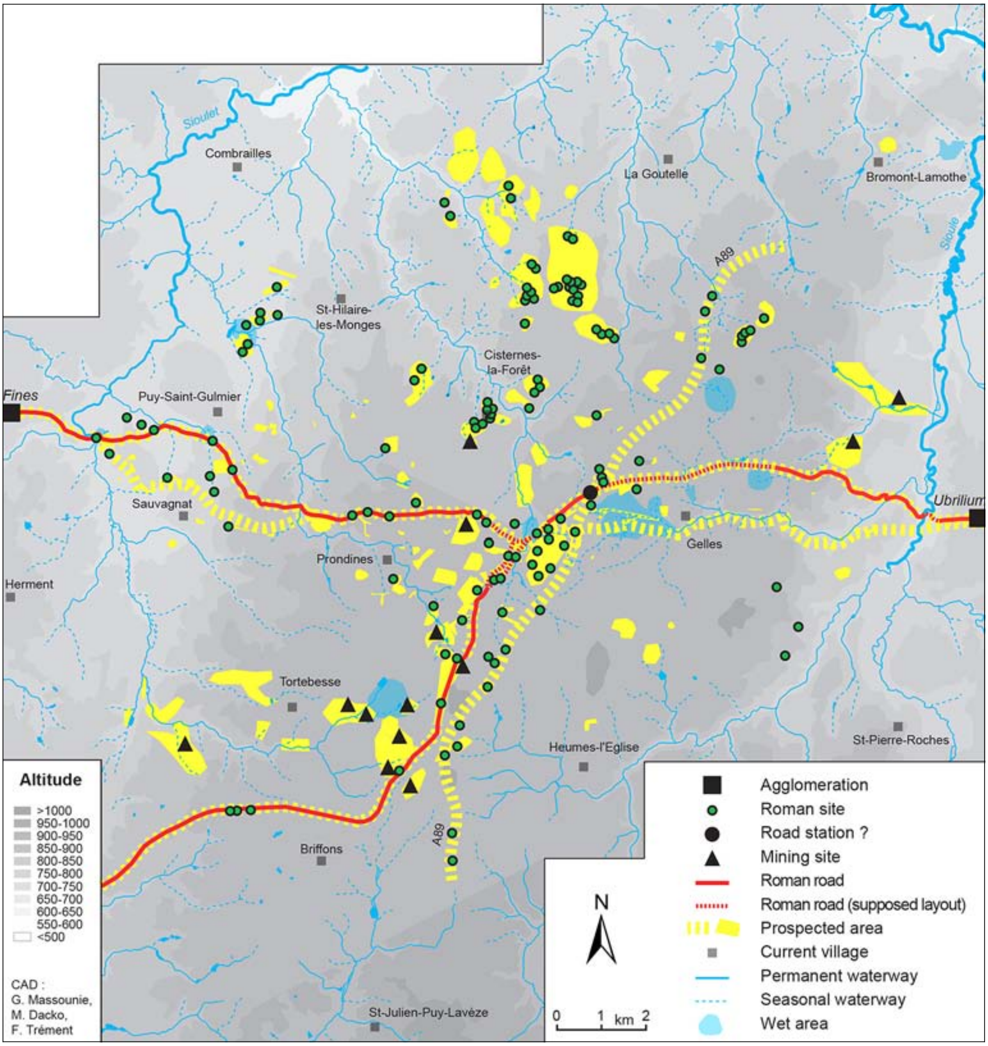

FIGURE 5.3 Haute-Combraille: the area of Gelles-Prondines in the Early Empire
CAD: G. MASSOUNIE, M. DACKO AND F. TRÉMENT

other sites, but archaeological evidence of agricultural and artisanal activities as well as some funerary material have been discovered.

Although Roman sites are present everywhere where conditions for doing research are advantageous, some areas show quite marked concentrations.[64] In the basin of La Narse-Pérol three Roman villas, situated 1 km apart from each

64 Massounie 2011.

other, were surrounded by a dozen other sites. Unfortunately, the nature of many of these smaller sites has yet to be established. In the zone of Éclache and Puy-Gilbert to the south (in the municipality of Prondines), three more villas and several other sites were scattered across an area of approximately one square kilometre that bordered several mining areas.[65] The palynological analyses carried out on the site of the Puy-Gilbert villa indicate an open landscape dominated by agro-pastoral activities.[66] A third example comes from the Puy du Faux-Les Imbauds, in the municipality of Cisternes-la-Forêt. On the southern and western slopes of this fertile hill, covering an area of approximately two square kilometres, more than 20 sites have so far been identified. Since no ancient roads have been detected and no agglomeration has been identified, we seem to be dealing with a 'poly-nuclear' pattern of settlement.

In some cases dense concentrations of archaeological material might indicate the presence of a grouped settlement. Less than 2 km north-east of the putative crossroads of the two roads connecting Clermont and Limoges, and Gelles and Ussel respectively, a roadside settlement along the Agrippan Way might have provided accommodation for travellers. So far no evidence pointing to the existence of an agglomeration has been detected near the crossroads itself but since the conditions for carrying out any investigations in this area are far from advantageous, we cannot say with any certainty that no agglomeration existed. On general grounds one would expect to find an agglomeration or a road station/staging-post in this sector, not only because such settlements have been found near many other crossroads, but also because roadside settlements are likely to have been fairly regularly spaced along the Agrippan Way between *Augustonemetum* and the agglomeration of Beauclair [9]. This road passed through several confirmed or potential agglomerations: from east to west, the road and worship complex of Col de Ceyssat [11],[67] the site of La Croix de Coheix (Mazaye), traditionally identified with *Ubrilium* [10] and probably identified by soundings conducted at Pré Marcel,[68] the hypothetical station of La Narse-Pérol referred to above, and finally the agglomeration of Beauclair [9] (Table 5.1).

The settlement of Beauclair that straddles the communes of Voingt and Giat is identified with the *Fines* on the Peutinger Map (Fig. 5.3).[69] It was occupied

65 Rebiscoul 2003; Rebiscoul et al. 2009; Trément 2016.
66 Prat 2006.
67 Trément ed. 2003; Trément 2013b.
68 Trément 1999.
69 Clémençon and Ganne 2009.

TABLE 5.1 Distances between known and suspected road stations on the Agrippan Way west of *Augustonemetum* (CAD: F. Trément)

Current place name	Name on the Peutinger Table	Distance from previous road station (in kms—from east to west)
Clermont-Ferrand	*Augustonemetum*	–
Col de Ceyssat		10,6
La Croix de Coheix	*Ubrilium*	8
La Narse / Pérol		11,2
Beauclair	*Fines*	16

from the first century BCE to the fifth century CE. The road traverses the southern part of the agglomeration. Excavations and both surveys by air and on foot have revealed dwellings, a thermal building, two places of worship, two necropoleis as well as yielding indications of diversified craft activities. It is worth noting that this agglomeration, which is about 40 hectares in extent, is located about 45 km west of the chief town. Approximately the same distance separates *Augustonemetum* from two other agglomerations with a similar surface area: Charbonnier-les-Mines [28] and Vichy [5].

Hence it appears that the construction of the Agrippan Way played an important role in the opening up and development of this upland area in the western part of the territory of the *Arverni*. This leads to the assumption that, in addition to agriculture, other resources were exploited. These probably included animal husbandry, timber production, stone quarrying and working and the extraction of minerals. As in the Limousin, the extraction of gold seems to have been interrupted at the time of the Roman conquest,[70] but silver lodes continued to be exploited in various places, particularly in the Sioule Valley[71] and in the Blot-l'Église area, in which a mining agglomeration [7] is currently being excavated.[72]

4.2 *North-Eastern Cantal*

Another part of the peripheral uplands for which large amounts of information are available is the North-Eastern Cantal (Fig. 5.4). Marion Dacko has shown

70 Trément 2016.

71 Marconnet 2000; 2001.

72 Delhoofs 2012; Delhoofs ed. 2013; Delhoofs et al. 2016.

that the old hypotheses about the trajects followed by Roman roads in this area are not based on valid archaeological data, but without being able to propose any alternative routes.[73] So far the existence of two ancient routes linking the *civitas* of the *Arverni* to the southern territories of the Massif Central have been proposed in the scholarly literature. The first of these, variously referred to as the 'Brioude-Massiac-Figeac road', the *via Terrana*, or the *via Celtica*, is supposed to have connected the ancient agglomeration of Brioude to the territory of the *Cadurci*. The second one, the 'Clermont-Javols road', supposedly a stretch of the 'Régordane Way', was believed to have connected the *civitas* of the *Arverni* with that of the *Gabali* and its chief town, *Anderitum*/Javols, via the valley of the Alagnon and the Monts de la Margeride.[74] Recent surveys have made it possible to locate the sites referred to in old publications relating to these roads and to map them. The data currently available do not support the view that these two axes of communication were of ancient origin. Nor do they permit us to establish the trajectories they followed through the Brivadois area and the Alagnon Valley. We are therefore reduced to mapping ancient agglomerations that cannot be connected to any road network. Future research might help us to set this unsatisfactory state of affairs to rights.

The work carried out by Maxime Calbris[75] for a PhD thesis argues for a downward revision of the number of agglomerations envisaged in the past by Alphonse Vinatié (Fig. 5.4).[76] Earlier hypotheses regarding the existence of agglomerations at Molompize, La Chapelle-Laurent, Saint-Poncy and Montchamp were based solely on their proximity to supposed Roman roads,[77] but must be rejected because there is not enough archaeological data, such as tiles, ceramics or building materials that can be linked to hypocausts, to support them.[78]

After a critical revision of the data set, the existence of three potential agglomerations can indeed be acknowledged.

In Massiac [36], the hypothesis of a small grouped settlement occupied at the beginning of the Early Empire is supported by archaeological material to which radiocarbon dating has assigned the period between the first century BCE and the second century CE. The occupation of this site can be linked to the exploitation of the Mine des Anglais that is situated below it, c. 400 m

73 Dacko 2016.
74 Vinatié and Orceyre 1992; Vinatié 1995.
75 Calbris in progress.
76 Vinatié 1995; 2002.
77 Provost and Vallat 1996.
78 Baret 2015.

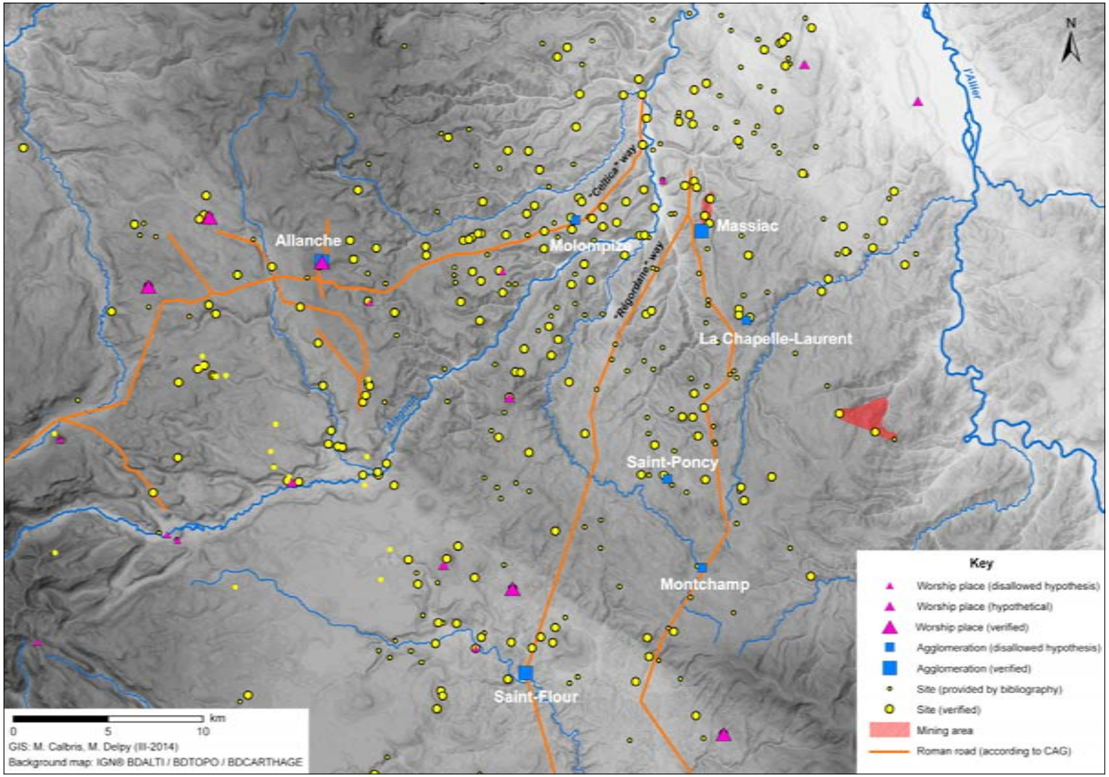

FIGURE 5.4 Northeastern Cantal: updated version of the *Carte archéologique de la Gaule* (Provost and Vallat 1996) and *Patriarche* (2013) for the Roman period
CAD: M. CALBRIS AND M. DELPY AFTER MITTON 2007

to the north.[79] To judge from the description provided by the excavators, the hypocaust structure that was found near the mine in the late 1970s belonged to a private dwelling rather than to an ore smeltery.[80] Could this have been the house of the person in charge of the mine, while the houses of the miners would have been relegated to the top of the hill, south of the extraction zone?

In Saint-Flour [37], there are various indications suggesting the existence in Roman times of an agglomeration at the foot of the medieval village in the Bel Air district. During the construction of a housing estate at the end of the 1960s, evidence of ancient buildings was discovered. These traces cover an area of approximately 3 hectares. During the construction of the railway at the end of the nineteenth century, a necropolis was discovered in the area below this site.[81] The size of the occupied area as a whole can be estimated as a little more than 7 hectares.

A third agglomeration has been identified in Allanche [35], at an altitude of 1,250 m. Surveys on foot conducted in 2015 and 2016 have revealed abundant and diversified artefacts over an area of at least 20 hectares. More indications of metallurgical activity have been found to the east of this zone, and traces of a funerary space have been detected to the south.[82] The occupation of this agglomeration seems to have commenced at the beginning of the Augustan period and to have ended in the third century. The existence of a place of worship, a possibility aired in earlier publications,[83] has been confirmed by geophysical surveys carried out in 2016. These investigations revealed a rectangular *fanum* that was surrounded by a *peribolos* equipped with a gallery.[84]

During the Roman period, the area of the North-Eastern Cantal was also structured by villas and sanctuaries. Examples include the villa of Massiac, which was occupied between the first and fourth centuries CE, and the sanctuary of Landeyrat, at which recent systematic surveys have revealed that the site visible from aerial photography extended over an area of about 8 hectares.[85] Unfortunately, we do not know the exact location of the necropolis discovered in 1904. At this stage, it remains unclear whether any agglomeration existed near this sanctuary.

79 This site used to be called 'La Minayre' but was renamed after the BRGM's borings in 1968 (Vialaron 1999: 70).

80 Vinatié 1995.

81 Delort 1881: 152–153 and 181–182; Vinatié and Maigne 1999; Calbris 2014; Baret 2015.

82 Vinatié 1991; Vinatié and Baillargeat-Delbos 2002.

83 Vinatié and Baillargeat-Delbos 2002.

84 Calbris in progress.

85 Ibid.

The patchiness of the archaeological record makes it difficult to formulate any sound hypotheses about the dynamics of regional development in the North-Eastern Cantal under the Early Empire. The economy of the region was probably based on agro-pastoralism and on the exploitation of wood, silver and lead.[86] As in Haute-Combraille, the current state of knowledge suggests a development essentially based on a network of rural settlements and small agglomerations that displayed at least some 'urban' features.[87] Acting as poles for the mountainous zones, in areas in which there were no large villas, these agglomerations probably served as commercial and administrative foci. Future research is expected to shed more light on the road network of this region and on the role of these agglomerations as centres of production and exchange.

5 Conclusion

The foregoing sections have highlighted the importance of four factors that seem to have strongly influenced the organisation of settlement in the *civitas* of the *Arverni* during the Early Empire: topography, available resources, the density of the road network and the distances between the chief town, small town-like places, simple agglomerations and villages. Furthermore, there are strong reasons to think that the situation which had been inherited from the pre-Roman period was an important 'generator of dynamics'. In both the Clermont Basin and in the area of Vichy, the presence of important sites at the end of the Iron Age lay at the base of a development that expanded after the Roman conquest. However, it should be emphasised that the long-term effects of 'cumulative causation'—the 'cumulative effect' or 'multiplier effect' identified by Gunnar Myrdal that inspired John Friedmann—did not happen without major re-arrangements in the local and regional power structures.[88] As we have seen, incorporation into the Roman Empire triggered displacements of political and economic power from *oppida* towards a central town or to other town-like agglomerations. These spatial reconfigurations could be interpreted as adaptations to the new political and socio-economic conditions of the Early-Imperial period. In the Clermont Basin, the complex evolution of the various central places inherited from the Iron Age seems to exhibit a process of competition and subsequent rebalancing in favour of the new chief town. After

86 Delpy in progress.
87 Trément et al. 2014.
88 Myrdal 1957.

the Roman conquest, *Augustonemetum* rapidly became a major centre of the province of *Aquitania*, to the detriment of various existing settlements, such as *Gergovia* and Gondole whose development was inhibited by their proximity to the central town.

The existence of a causal connection between proximity to the *civitas* capital and opportunities for development is confirmed by the identification of three large agglomerations that were located approximately equidistant from the chief town. These three agglomerations are Vichy [5], that was situated 46 km north of *Augustonemetum*, Beauclair [9], that was situated 45 km to the west, and Charbonnier-les-Mines [28], that was located 42 km to the south. The size of the occupied areas of these three centres varies between 35 and 50 hectares, making them the largest agglomerations in the territory after the chief town and the old *oppida* of the Clermont Basin. The growth of these agglomerations seems to reflect their remoteness from the major development area in the Limagne plain. The existence of these large centres suggests that they catered to a demand for various services in the peripheral districts of the territory.

While these spatial patterns do tally with the predictions of the 'core/periphery' model, it is impossible to assess the degree of economic dependence of these second-level settlements on the central town. Moreover, some important questions regarding the role of second-level towns and other agglomerations in structuring the territory and facilitating or stimulating economic development still remain unanswered. On a local level, town-like agglomerations must have functioned as poles of organisation for the population of the surrounding district and as local market centres. However, it is difficult to establish whether or not these places served as market centres for a wider region. A regional role can safely be assumed for towns such as Vichy [5] and Varennes-sur-Allier [3], which were located on the banks of the Allier River, at crossroads linking the territories of the *Arverni*, *Bituriges Cubi*, *Aedui* and *Segusiavi*, and at the heart of a pottery production area whose distribution was quite obviously not confined to small areas. These towns, which were situated at a distance of approximately 50 km from *Augustonemetum*, were unquestionably important development poles for the northernmost parts of the *civitas* territory.

A ceramographic study conducted by Jérôme Trescarte has already shed some additional light on regional economic dynamics.[89] In the lower part of the Allier Valley and its alluvial plain, the main centres of power and population were distributed along a north-south axis during the final La Tène period,

89 Trescarte 2013.

and it was also along this axis that a well-organised system of ceramic production developed from the middle of the first century BCE. From the Augustustan period, the axes that connected the new chief towns of the *civitates* (*Forum Segusiavorum*, *Augustonemetum*, *Augustoritum*) to the two provincial capitals, Lyon for *Gallia Lugdunensis* and Saintes for *Gallia Aquitania*, grew in importance, perhaps somewhat eclipsing the natural north-south axes constituted by the valleys of the Allier and the Loire. In the centre of the territory of the *civitas* of the *Arverni*, the Clermont Basin and the Grande Limagne Plain were crossed not only by the new east-west road linking Lyon and Saintes (the 'Agrippan Way'), but also by the north-south axis constituted by the Allier River and the terrestrial route that ran parallel to it (the '*Cessero-Augustonemetum-Avaricum* Way'). The new land routes provided the workshops of the Allier Valley with new markets, particularly in the direction of Saintes and Bordeaux to the west, and the capital of *Lugdunensis* and the Rhône Valley to the east. They also facilitated the exchange of technology, expertise and specialist craftsmen between workshops that could sometimes be separated by large distances.

In the second half of the first century CE, the adoption of new technical, morphological and aesthetic standards resulted in the manufacture of new types of tableware that were clearly Roman in appearance. These new ceramics were produced on a much larger scale than before. The new workshops that were established in this period, especially those producing C mode *sigillata*, seem to have been geared towards production for export to a much higher degree than those of earlier decades. Moving away from the main towns, these workshops developed in the immediate vicinity of major communication routes in order to optimise the transportation of their products along both the north-south and east-west axes. These new centres of productions required high quality raw materials, enormous amounts of firewood and a large and skilled workforce.

Examples of workshops that benefited from their proximity to the new land routes include Feurs, Courpière [23] and Sermentizon on the Agrippan Way, as well as those of the north-eastern part of the *Arverni* territory. Most of these workshops were *ex nihilo* creations. The emergence of workshops producing *terra sigillata* and other types of ceramics along the Allier, the Loire and their respective tributaries (Coulanges, Lubié, Saint-Pourçain-sur-Besbre, Saligny-sur-Roudon, Saint-Léger-sur-Vouzance/Saint-Léger-des-Bruyères, Thiel-sur-Acolin, Bourbon-Lancy) can be linked to the navigability of the main rivers that allowed a diffusion of their products in the direction of northern and western Gaul. The workshops belonging to the latter category were also located near major land routes, but outside the region dominated by the large production centre of Lezoux and its secondary workshops. The creation of these new work-

shops seems to have been a predominant feature of the early second century CE and can be understood as a way of optimising the diffusion of their products.

Therefore the inevitable conclusion must be that the 'frontier zone' between the territories of the *Arverni* and the *Aedui*, ideally located near north-south axes and roads running from east to west, must have emerged as a zone of new development. In the second half of the first century BCE and the early first century CE, the heart of the territory of the *Arverni* and the agglomerations of the Allier Valley had been the primary markets of craftsmen and traders, but then the situation changed. From the second half of the first century CE, the ceramics produced in this frontier zone began to be distributed over long distances, with the population of the large agglomerations of the region itself no longer the main outlets. These local markets were perhaps also supplied by the workshops located in the immediate vicinity of the main population centres that also began to produce mode C *sigillata* in this period.

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CHAPTER 6

Urbanisation of the Iberian Peninsula during the Roman Period: Choices, Impositions and 'Resignation' of the Newcomers

Oliva Rodríguez Gutiérrez

1 Introduction*

In the third book of his *Geographica* Strabo gives a rather unfavourable description of the Iberian Peninsula: 'From its very nature, this country is incapable of maintaining so many cities, on account of its sterility, wildness, and its out-of-the-way position. Nor, with the exception of those who dwell along the shores of the Mediterranean, is any such statement confirmed by the mode of life or actions of the inhabitants. The inhabitants of the villages, who constitute the majority of the Iberians, are quite uncivilized. Even the cities cannot very easily refine the manners of a folk that live in the forests for the purpose of working mischief upon their neighbours'.[1]

Despite the simplistic way in which urbanism and settlement are dealt with by Strabo, in the Iberian Peninsula during the Roman period these were enormously complex issues. Strabo never visited the Iberian Peninsula, but he, along with other classical writers, played a key role in the way modern historiography has addressed many subjects.[2] Indeed, it is worth noting that often a comprehensive overview of the issue at hand can easily result in a superficial and insufficiently analytic perspective. For this reason, I will focus on the strategies used by Rome in the progressive occupation of various Hispanic territories. This process spans the period between the territorial conquest—not

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1 Strabo 3.4.13. Translation taken from the *Perseus Digital Library*. For a recent synthesis of the image of Spain in classical literary sources, see Cabrero 2007.

2 His main sources were Artemidorus, Posidonius and Polybius, all of whom wrote in the second century BCE, one century before his own time.

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only in military terms—that followed the end of the Second Punic War in the late third century BCE, and the Flavian period. The municipal policy pursued by the Flavian emperors included the concession of the *ius Latii* to all Hispanic communities; in many ways, this concession may be regarded as the culmination of the process of adaptation and negotiation that took place in Hispania, and the assumption of a new degree of administrative and territorial maturity.[3]

During the Roman period, the Iberian Peninsula was a highly urbanised society, and this was one of the key markers of its common identity. In order to better understand the regional variations and the different choices that these involved, it is necessary to take into consideration several variables. From the point of view of geography, the position of cities with regard to communication routes and/or economic resources was crucially important. From the perspective of chronology, it is also relevant to remember that, throughout this period, Rome itself was reassessing its own urban experience, and developing more complex and formalised urban models. Last, but not least, from a cultural perspective, the pre-existing social, economic and territorial structures upon which the Roman model was to be applied also played a crucial role in the process of urbanisation.

This lengthy process began with the occupation of Spain by Roman armies in the late third century BCE, and culminated in the late first century CE, with the aforementioned extension of the *ius Latii* to all communities. It is thus unsurprising that, over time, multiple formulas for the creation and promotion of cities were tried.

An in-depth analysis which rejects traditional unidirectional approaches to the process of Romanisation reveals a Roman economic-political strategy that was based, at least in the initial centuries, on pre-existing social structures, especially within those regions where indigenous and Roman perspectives were more in tune with each other from a cultural point of view.[4] In these regions, Rome openly promoted certain urban nuclei, which were either created *ex novo* or built around a previous settlement, sometimes by encouraging processes of synoecism. Rome did not interfere with territorial, institutional or kinship structures, as long as they could be accommodated within the new order. This was expressed in a wide array of statutory formulas: while most com-

3 García Fernández 2001.

4 For a new perspective on the process of Romanisation in the Iberian Peninsula, see especially Bendala (2000–2001; 2005; 2006) as well as the contributions of Jiménez (2010; 2016) from a post-colonial perspective. See Rodríguez Gutiérrez 2010 for a general overview of the issue, with the latest international bibliography.

munities were considered *stipendiariae*, there was a select group of *civitates foederatae* and *civitates liberae et immunes*, and a handful of privileged *coloniae* and *municipia*.

More strictly defined urbanisation policies were not forthcoming until the initiation of the urbanisation programme by Caesar, which was finished by Augustus.[5] Two paradigmatic cities that resulted from this programme are *Caesaraugusta* and *Emerita Augusta*, which became strategic hubs (to the detriment of other centres which had responded to the various territorial interests prevailing during the Republican period).

As well as this chronological qualification, we should also consider that this was a very large region, so my perspective will, inevitably, remain rather general. I shall not be able to deal with specific regional case studies as much as I would wish, owing to the level of local variations. In recent years, other researchers have approached some of these regional scenarios using a methodology based on different variables to develop a hierarchy of settlements.[6] More recently, some of these regions have been analysed using mathematical and statistical tools; these tools have been used to examine social networks encompassing urban nuclei.[7] I do not wish to undermine the value of these tools, especially because they expand our field of vision and prompt us to re-examine the questions that historians must ask of the record, but I think that the polyhedric and enormously diversified nature of social structures in the Iberian Peninsula precludes the applicability of any region-specific result to other territories. Moreover, the use of these tools often involves abandoning important historical premises, specifically with regard to the role played by pre-Roman social conditions and the rhythm of the process of Romanisation, as we shall see presently.

2 The Iberian Peninsula at the Time of the Roman Arrival

Geographical-chronological parameters played an important role in the process of urbanisation undergone by the Iberian Peninsula during the Roman period. Despite the Peninsula's famed wealth, especially in terms of precious metals, the truth is that Romans had shown little interest in these territories

5 Bendala 1990.
6 A good example of this is Houten 2016. See also Adams and Laurence 2001; Laurence et al. 2011. For the application of this approach to the Iberian Peninsula, see De Soto and Carreras 2009; Carreras and De Soto 2010.
7 Isaksen 2007; 2008; Earl and Keay 2007; Brughmans 2010; Brughmans et al. 2012.

before the increasing pressure posed by Carthage from southern Hispania and the aggressive policies of the Barcid dynasty, which triggered the Second Punic War.[8] With the Romans victorious and the Carthaginians expelled from the Peninsula for good—this event is conventionally dated to 206 BCE, after the Battle of Ilipa—the Romans were confronted with the difficult task of pacifying and urbanising the Hispanic territories. Rome not only lacked a pre-planned blueprint, since maintaining possession of the Iberian Peninsula had never been part of its strategic thinking, but it was also still trying to figure out its own role in the newly conquered territory. As a result, initial urbanisation policies were characterised by improvisation and expediency;[9] a more clearly thought-out and planned policy was not forthcoming until the Augustan period, as I shall examine in more detail later.

In order to better understand the different dynamics at play, it is necessary to assess the situation that Rome would have found upon its arrival in the Iberian Peninsula. I do not want to stray into the realm of the tedious by repeating truisms, but it cannot be emphasised enough that the process of Romanisation must not be understood from the simplistic, unidirectional perspective that has too often been the norm (especially, but not only, among non-Spanish specialists). If any progress has been made in our knowledge of Roman Hispania, this has been the result of a more extensive and nuanced understanding of conditions in pre-Roman times—a topic which has been the focus of much valuable research in recent decades.[10]

It is generally accepted that Rome arrived in the Iberian Peninsula in 218 BCE, and that the final defeat of the Carthaginians took place in 206 BCE. As early as 197 BCE the provinces of Citerior and Ulterior were created and the first governors dispatched.[11] Initially, these territories were limited to a narrow band along the Mediterranean coast; in the south, these dominions also extended towards the interior of the Guadalquivir Valley, encompassing the Strait of Gibraltar and part of the Atlantic coast.

8 Concerning the episodes that preceded and succeeded the Second Punic War and the Carthaginian presence, see the recent syntheses (with bibliography) Bendala 2013 and 2015. For a work in English, see Hoyos 2003.

9 Bendala 2000–2001: 415.

10 For a general overview of Spanish proto-history, see the following syntheses (with bibliography): Sánchez-Moreno 2007 and Gracia Alonso 2008. As an introduction to this analysis by province, Rodríguez Gutiérrez 2011 also supplies an overview of the situation in the Iberian Peninsula prior to the Roman arrival.

11 For military, political and administrative events in the initial stage of the Roman conquest, see Roldán and Wulff 2001.

As was pointed out by some classical authors, including Strabo,[12] these were the most highly civilised territories in the Iberian Peninsula—that is, those that resembled most closely the Graeco-Roman model. Expressed in more modern terms, we may suggest that these territories had a greater degree of cultural affinity with the new conquerors. This, obviously, was a consequence of the secular influence exercised upon these regions by Mediterranean peoples, especially the Phoenicians and Greeks. In more recent times, the cultural milieu of these regions was further influenced by the Punic presence, which was shaped to conform to Hellenistic models that were very similar to those adopted by Rome itself.[13]

The wealth of the Peninsula attracted other peoples long before the Romans made their appearance (Fig. 6.1). Some of the most articulated and hierarchised forms of territorial organisation, including complex, fortified settlements that functioned as central places, emerged from the exploitation and control of mining resources. Several examples should be mentioned: Tejada la Vieja (Escacena del Campo, Huelva), which is related to the mining region of Aznalcóllar;[14] *Ilipa* (Alcalá del Río, Seville)[15] and later *Italica*,[16] along the lower course of the Guadalquivir, which were harbours for several mining districts in Sierra Morena; and Sisapo-La Bienvenida (Almodóvar del Campo, Ciudad Real) near the mines of Almadén.[17] It is no coincidence that the locations chosen by the Barcids for their fortifications included *Castulo* and *Carthago Nova*, which are near mining districts that were also intensively exploited in Roman times.[18] In addition, although it is clear that the Romans brought the organisation of agricultural and fishing resources in Hispania to a new level, archaeological evidence has amply demonstrated that these sectors were also of great importance for the previous socioeconomic structure. The production and processing of wine, oil and salted products is attested from a very early date along the north-eastern coast, in the Ebro and the Guadalquivir Valleys, in the Bay of Cádiz and in different enclaves on the Atlantic coast.[19]

Intense archaeological exploration during recent decades has demonstrated that important urban nuclei existed in different areas of the Iberian Peninsula

12 Strabo 3.1.2, 3.1.6, 3.2.3; Ptol. 2.4.10.
13 Ferrer 2011; Bonnet 2014.
14 Hunt 2003; 2008; Pérez Macías and Delgado 2012; 2014.
15 Rodríguez Gutiérrez 2007; 2012.
16 Garrido 2011; Amores et al. 2014; Rodríguez Gutiérrez and García Fernández 2016: 237.
17 Zarzalejos et al. 2011; 2012.
18 Díaz Ariño and Antolinos 2013; Arboledas et al. 2017.
19 García Vargas and Ferrer 2006; Ferrer et al. 2008; García Vargas et al. 2008.

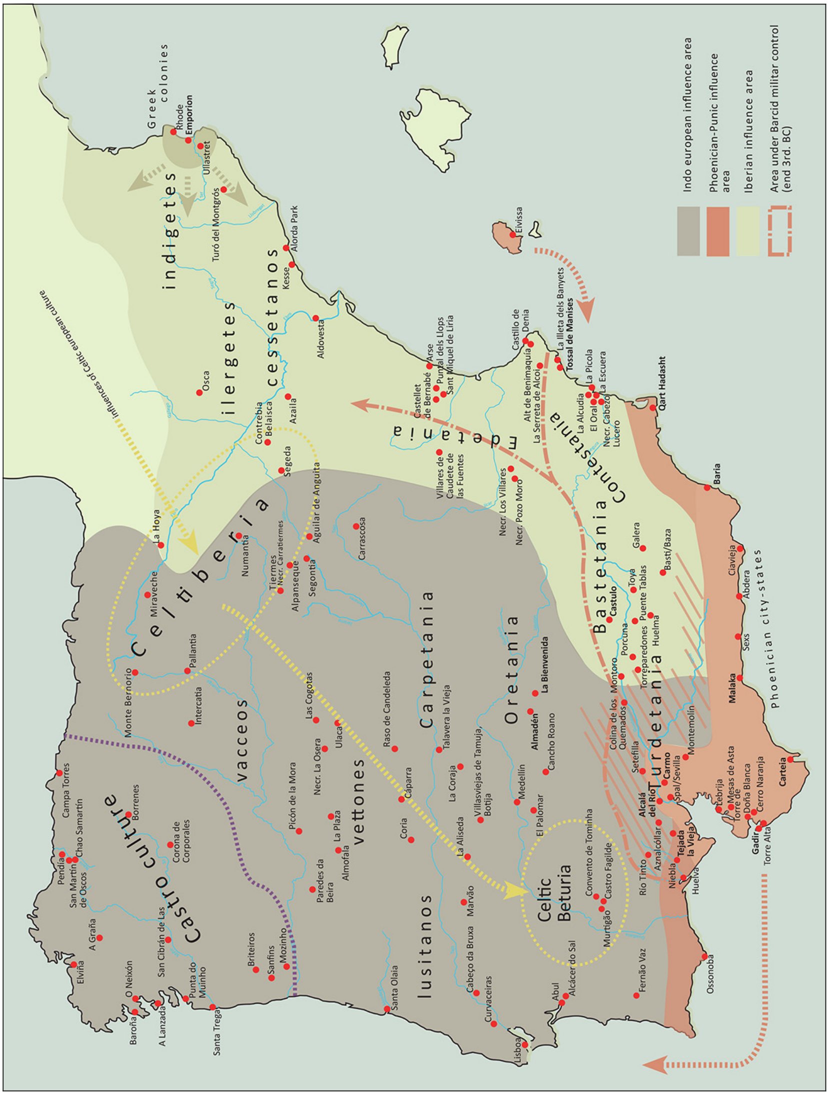

FIGURE 6.1 The Iberian Peninsula in the late Iron Age (6th–2nd BCE)

from a very early stage. With the arrival of Rome, these centres were incorporated into the new order.[20] In this sense, it may be said that, rather than being initiators, the Romans were the catalysers of a process that was already in motion.

The two regions in which this urban tradition was more clearly present are the south and the eastern coast, both of which first received a number of Phoenician and Greek foundations[21]—*Gades*, *Malaca* or *Emporion*—and subsequently several important Carthaginian centres[22]—*Carteia*, *Carmo*, *Baria* and Tossal de Manises. The latter group of towns was part of a clear attempt to organise the territory under Carthaginian control according to Hellenistic models. This attempt involved the foundation of strong urban centres and the consolidation of the road network. The main thoroughfare of this road network was the so-called *via Heraklea*, which was later renamed *via Augusta*.[23] The most significant Carthaginian foundations include *Qart Hadashat*, later known as *Carthago Nova*, which stands as a perfect example of the robustness of the urban principles applied by the Punic planners. The urban structure of *Carthago Nova* did not undergo any major transformations until the beginning of the imperial period.[24]

3 Consensual, Hybrid Solutions

In this context, Rome began by maintaining the existing cities, which surrendered unconditionally by *deditio*. Most of these cities, as a result, became stipendiary cities, losing sovereignty over, but not the use of, their territory, and submitting to paying taxes; these cities were not allowed to arm themselves, and their men could be recruited by the Roman armies. The conditions of stipendiary cities are well known, and are especially well evidenced in the epigraphic record.[25]

If we move away from their administrative classification, we can ask: how many of these pre-Roman settlements could be considered true cities? A city is much more than an extensive agglomeration of buildings. Other ingredients

20 For the urban phenomenon in the Iberian Peninsula before the arrival of Rome, Bendala et al. 1986 remains the best synthesis, despite the fact that is over 30 years old.

21 Bendala 2009: 363. More recently, F. Machuca 2017 has examined the integration of Phoenician-Punic communities in the Roman order.

22 Bendala 2000–2001: 417.

23 Roldán 1975; Blánquez 1990.

24 Noguera and Madrid 2009; Noguera 2012.

25 The most up-to-date corpus of Republican inscriptions in Hispania is Díaz Ariño 2008.

are needed that demonstrate an articulate community life: the centralisation and administration of resources; the specialisation of economic activities; the distribution of social and political roles; a sense of collective identity; the identification of the *res publica*; the existence of magistrates with jurisdiction over the territory; a well-defined hinterland on which the urban supply relies; and some ability to defend itself.[26]

Some of these elements can be recognised in the archaeological record: discrete areas dedicated to political and religious activities, industrial districts, complex defensive systems, and the capacity to store and redistribute goods produced in the city's hinterland. Similarly, political continuity is confirmed by the survival of institutions and magistracies, and their incorporation into the new Roman order. The recurrence in the epigraphic, literary, numismatic and juridical records of generic terms such as *magistratus* and *senatus* in stipendiary cities, until well into the imperial period, has led specialists to believe that these terms, in fact, apply to pre-Roman institutions, which the Roman conquerors had no interest in changing or replacing.[27] The dissemination of Roman municipal policies, therefore, involved no traumatic political change in many cities, but rather the consolidation of pre-existing structures. Even some privileged communities could keep, at least at the beginning, their ancestral institutions, as the *ordo Singiliensis vetus* (of *Singilia Barba*) seems to demonstrate.[28] Many of the *senatus* which appear in the epigraphic record allude to communal councils, now of peregrine status. Up to what point these institutions could be considered 'mature'—that is, whether the members of these councils were elected, organised in collective bodies, and had a limited term-of-office, is harder to tell. We know, for instance, that *shophtim* acted in Gades,[29] which would be expected in a Punic city, and that in some cities in the northern central plateau and along the north coast, and even in Baetica, the references to *principes* (*civitatum*)[30] could well allude to patronage and supra-family networks, such as the *gentilitates* mentioned in numerous inscriptions.[31]

An inscription found in La Rambla,[32] near Corduba, in which there is a probable reference to the community of *Ulia*, is illustrative of the importance of this flexible approach to administrative matters. The inscription is dated to 49 BCE;

26 Abascal and Espinosa 1989: 13.

27 For the survival and adaptation of pre-Roman magistracies and administrative formulas during the Roman period, see, in general, Rodríguez Neila 1998a; 1998b.

28 *CIL* II, 2026; 2042; Rodríguez Neila1998a: 260.

29 Rodríguez Neila 1998a: 258.

30 Rodríguez Neila 1998a: 257; 1998b: esp. 117–118.

31 Sastre 2002.

32 Rodríguez Neila 1998a: 255, 266; Díaz Ariño 2008: cat. U38, 222–223.

a *decemvir*, who was indigenous in origin and a non-citizen, and an aedile, who was probably Italian and bore *tria nomina*, shared the expenses for the construction of a city gate. The *decemviri*, although not unique to the Iberian Peninsula, seem to constitute the fossilisation of non-Roman forms of organisation, acting either as a kind of governing council, or as a temporary committee appointed by the local senate—sometimes with an official figure at its head, the *decemvir maximus* (*Regina*, *Ostippo*)[33]—to deal with a specific issue. The uneven number of decurions in different cities in Hispania and the provinces in general, as suggested by the few explicit references (in Spain, *Urso* and *Irni*), has been interpreted by certain authors as a reflection of the consolidation of pre-Roman government bodies, whose members varied in number from community to community.[34] In privileged communities, the members of these bodies may have negotiated with Rome to make sure that local power remained in the same hands as it had previously been. Rome, for its part, kept these institutions in place because they could be easily turned to pursue its interests. However, over time, the local elites—either Roman-Italian or indigenous—progressively and spontaneously introduced elements of change that were not directed by the Roman state.

This flexibility and versatility to adapt to previous administrative structures are also reflected in hospitality/patronage tablets which emphasise the participation of local senates and assemblies (*senatus populusque*), especially in the series of bronze inscriptions from *Contrebia*.[35] The languages (Latin and Iberian) in which the different texts are written and the institutions mentioned in them were adapted to the administrative everyday needs of a stipendiary community, and this is a good illustration of its administrative autonomy. In *Ilipa*, a harbour city on the Guadalquivir River, which had grown to a substantial size even before the Roman period, an individual of obvious indigenous origin (*Urchail Attita f. Chilasurgun*) left epigraphic evidence of the construction of some gates and arches in the late Republican period:[36] the lettering (square capitals) and the event commemorated (a classic example of Roman euergetism) could not be more orthodox-Roman.

33 Rodríguez Neila 1998a: 266–268.

34 For a general overview of this variability, see Olcina et al. 2013: 182–183. It should, however, be noted that the size of town councils also varied in early-imperial Italy; see Nichols 1988.

35 Rodríguez Neila 1998b; Sastre 2002: 159–160; Díaz Ariño 2004; Espinosa 2015: 240. For *Contrebia*, see Díaz Ariño 2008: 94 ss. including bibliography concerning the edition of the bronzes.

36 *CIL* II, 1087. Díaz Ariño 2008: cat. U28, 212.

4 Juridical and Administrative Models

Let us continue with organisational aspects, specifically the relationships that existed between different cities. The decree passed by Aemilius Paulus in 189 BCE[37] reveals that a form of settlement hierarchy, in this case between *Turris Lascutana* and *Hasta*, in the modern province of Cádiz, existed prior to the arrival of Rome. Also, the painstaking archaeological surveys carried out in Spain in search for centuriations and other forms of Roman land-allocation systems have suggested that similar practices may have predated the arrival of Rome.[38] This is unsurprising, at least in the south and the east, where there was a deeply rooted Oriental tradition which was later consolidated and developed through the presence of the Carthaginians, who were well versed in surveying and developing new agricultural land.[39]

In a similar vein, the earliest Roman foundations in Hispania do not seem to correspond to a pre-determined pattern: e.g. *Italica* (206), *Carteia* (171), *Corduba* (169–168), *Valentia* (138), *Palma* and *Pollentia* (133–132), *Metellinum* (80–79) (Fig. 6.2).[40] After the foundation of these cities, most 'new' cities of the late-Republican period appeared as a result of processes of synoecism, in which a pre-Roman city was promoted and eventually attracted the population of smaller nearby settlements, or even the inhabitants of the rural hinterland, as we shall see later. Archaeologically, these settlements are characterised by their extreme conservatism; table wares and material culture in general largely continued local traditions, and Italian goods are found only rarely. Material culture indicative of the presence of Italians was, at first, limited to areas which would have been strategic from an economic perspective: wine-producing areas, mining districts and commercial hubs. Soon, however, the way of life of the new arrivals, and the way they worshipped, ate and drank, was to develop into hybrid forms, and this is one of the most interesting features of the archaeology of Republican Hispania.

37 *CIL* II, 5041; Hidalgo 1989.

38 Ariño et al. 2004. For the division and organisation of agricultural land before the Roman arrival in the Iberian Peninsula, especially on the eastern coast and in the Balearics, see González Villaescusa 2002.

39 Sáez 2001; see also Pardo 2015: 115–168 for the organisation of rural territories and the exploitation of Oriental resources in the Peninsula, between the fifth and second centuries BCE.

40 For a perspective on some of the earliest Republican foundations and their archaeological characterisation, see the collective work edited by Ribera and Jiménez Salvador 2002: 123–214 and 299–314, for *Valentia*.

FIGURE 6.2 The Iberian Peninsula in the 1st century BCE with the boundaries of the first Roman provinces

Different legal statuses coexisted during the consolidation stage of the Roman presence in Hispania. The urban and morphological characteristics of each of these statuses are, however, not so well evidenced in the archaeological record, especially because many of these settlements have been inhabited without interruption until the present day. Concerning legal status, the difference between colonies and municipalities, which had different subcategories (*municipia civium Romanorum* and *municipia* with *ius Latii maius* or *minus*), and *civitates stipendiariae*,[41] who had surrendered to Rome unconditionally and had no rights, is well known, but there were more categories which should be noted: for example, those cities that had signed a pact with Rome—always favourable to Rome, of course—which turned them into *foederatae*, such as *Gades* (Cádiz) and *Arse* (Sagunto). The former became a municipality under Caesar and the latter under Augustus. Like *civitates foederatae*, *civitates liberae et immunes*,[42] a category created unilaterally by Rome, were also considered sovereign polities. To judge from various clues contained in Pliny's *Natural History*, *Ostippo* (Estepa), *Cartima* (Cártama) and *Singilia* (near Antequera) might have belonged to this category, although it must be said that the passages in question are not always sufficiently explicit.[43]

Beyond these legal considerations, during the Late Republican period, Rome also took full advantage of the pre-existing urban framework, with very few *ex nihilo* foundations. We may thus ask: what policies were applied to improve existing settlements? The answer is fundamentally two: *contributio* and the creation of *dipoleis*.

The *contributio*, inspired by the idea of Greek synoecism, seems to have involved promoting a settlement to turn it into the regional centre and to attract people from smaller settlements nearby (*pagi, vici*). This process is mentioned in Pliny's *Natural History*,[44] as well as in the constitution of *Urso*, which refers to *incolae contributi* (ch. 103), in what seems to be the legal expression of the new form of territorial organisation. Some cities seem to allude to this process in their very name, such as *Contributa Iulia Ugultunia* (Medina de las Torres, *NH* 3.14). In other cases, a newly founded city assimilated a substantial number of locals from a nearby pre-existing settlement, who then coexisted with groups (of various sizes) of Italian colonists. This is, for example, the case with *Corduba* (Córdoba), where archaeological work has identified the pre-

41 Rodríguez Neila 1998a: 262.

42 Abascal and Espinosa 1989: 22.

43 Ordóñez 1988: 321.

44 *NH* 3.19, related to the links between *Ilici* and *Icosium*. A recent review of the different interpretations in Seguí 2017.

Roman settlement,[45] which was at least 30 hectares in size, slightly to the west of the Republican foundation that occupied a more strategic position near the *Baetis* River.

A similar example is *Celsa* (Velilla de Ebro), founded by Lepidus in 44 BCE. This 'foundation' involved the reorganisation of the previous settlement; the main nucleus moved from an elevated position to the plain,[46] something that we see repeatedly in the early stages of Roman urbanisation. Surprisingly, *Celsa*[47] was very short-lived and soon replaced by *Caesaraugusta* (Zaragoza), which was founded in an even more strategic location on the Ebro River. Some of the main Roman settlements in the centre of the Iberian Peninsula, such as *Segobriga, Ercavica* and *Valeria* seem to have emerged in strategically advantageous places near pre-Roman settlements,[48] to which they often owe their names. *Baetulo, Barcino* and *Astigi* are examples of this, although their archaeological visibility is poor. Current research on the city of *Baelo Claudia* and its hinterland is beginning to reveal that an earlier hilltop settlement, La Silla del Papa, which was largely agricultural in character, was replaced by a new city near the coast that focussed on the exploitation of fishing resources.[49] Both settlements share a marked Punic personality.[50] In any case, these processes must be considered perfectly normal in the ancient world, where the core of the notion of city rested on the citizens, regardless of the actual physical framework that these citizens chose in order to establish their home: this is the difference between *civitas* and *urbs*.[51]

The *dipolis* system, for its part, was not far removed from that of synoecism, insofar as the process generally consisted of the conflation of different urban nuclei. The process usually began with the foundation by Rome of a settlement near a pre-existing centre. The literary sources and toponymy provide substantial evidence of this process, which in many cases has also been evidenced archaeologically. The most paradigmatic case in Hispania is probably *Emporiae*.[52] The plural toponym—another example is *Didyme*, used to refer to *Gades*

45 Luzón and Ruiz Mata 1973; Murillo and Vaquerizo 1996.

46 Florus (2.59.6) records the mandatory descent of indigenous groups from the plateau in Augustan times, a process which, judging by the archaeological evidence, was anything but systematic.

47 Beltrán 2015.

48 Lorrio 2012.

49 Prados et al. 2012; Moret and Prados 2014.

50 Bendala 2010.

51 Bendala 2003: 30.

52 Aquilué 2012; on the recent works that have identified a city wall from the mid-second century BCE, see Castanyer et al. 2016.

(Strabo 3.5.3)—links with the accounts by Livy (34.9) and Strabo (3.4.8), which allude to the foundation, in the late second century BCE, of a military camp-settlement near the existing city, which had a hybrid Phocaean/indigenous composition. Both nuclei coexisted for a while, as the archaeological record demonstrates,[53] before joining to form one single city, which was the natural outcome for these double cities. Other possible examples include *Tarraco* and *Italica*. Unfortunately, in the case of the latter, very little can be found in the archaeological record on the contingent of Italians who, according to Appian, founded the city after the Battle of Ilipa. In fact, ceramic evidence indicates a marked continuity of local shapes from the earliest phase of occupation, during the fourth century BCE, well into the first century CE.[54] It is possible that the initial Italian settlement was in one of the areas of the city which have not yet been explored. The term '*gemella*' in the name of the colonies *Iulia Gemella Acci* (Guadix)[55] and *Augusta Gemella Tucci* (Martos) may also reflect the existence of double cities, although alternative interpretations exist. In this regard, the references to a *Tucci Vetus* (Plin. *NH* 3.10) and an *Astigi Vetus* (ibid. 3.12), which probably allude to pre-Roman settlements, are highly significant.

These hybrid solutions, in which the local population and Italian immigrants mixed (e.g. the *Colonia Libertinorum Carteia* in 171 BCE) as a result of *deductiones*, the creation of twin settlements, the arrival of Italian merchants and investors, and the establishment of economic enterprises, prompted the operation of cultural-assimilation mechanisms. These mechanisms are reflected in the archaeological record, for instance by funerary rituals and consumption patterns and also in the epigraphic habit. Any interpretation of these processes must avoid over-simplistic interpretations based on a false dichotomy between conqueror and vanquished.

5 Foci of Attraction and Territorial Strategies

Rome's selective approach to the pre-existing urban structures, therefore, prioritised the promotion of strategically located settlements. Wherever necessary, this was complemented with a few *ex novo* foundations.

53 Aquilué et al. 2002.

54 The first excavation to recognise the characteristics of Italica's material culture was the one that took place in the so-called 'Pajar de Artillo' where, among other objects, a pottery kiln was excavated (Luzón 1973); later, the stratigraphy and chronology were revised (Pellicer 1998). For a recent examination of the state of the question see Rodríguez Gutiérrez and García Fernández 2016: 229–230.

55 Stylow 2000.

Initially, emphasis was placed on mining districts, which had attracted the attention of other Mediterranean peoples for centuries. This emphasis on the mineral wealth of the Iberian Peninsula was related to the foundation of *Corduba*, the headquarters of the *societates* that managed the exploitation of *Mons Mariorum*, in Sierra Morena.[56] In this area, mining towns such as La Loba (Fuenteovejuna, Córdoba)[57] illustrate the coexistence of Italian managers and a local labour force, which also may have included personnel from farther afield, who were hired to work in the silver mines. Also, we should note the promotion of *Carthago Nova*, the main harbour for the silver and lead extracted from the mines of La Unión-Mazarrón,[58] or *Onuba* (Huelva) and *Italica* (Santiponce, Seville), which served as an outlet for the mining district of Río Tinto-Aznalcóllar in the area of influence of the Bay of Cádiz.[59] Although, in some of these regions, the resources that could be reached using the technology available were already exhausted by the late first century BCE, mining was still a strategic asset for the southern Iberian Peninsula, as demonstrated by the Augustan changes to the provincial boundaries, which were implemented after some hesitation in approximately 16–13 BCE.[60] The gold-bearing districts in the north-west and the area of Almadén-Linares (*Saltus Castulonensis*) were now included in the *provincia Citerior Tarraconensis*, which was given imperial rank.

This first phase, during which the interest of the Roman masters was limited to mining areas, was followed by a second stage in which agricultural and fishing resources gained importance: e.g. wine, oil, fish sauces and other by-products. These activities had always been crucial for the economic structure of various regions, but with increasing investment and the consolidation of a more complex social and economic structure their importance soared to unprecedented levels. Hispania was thus fully incorporated into the economic sphere of the Western Mediterranean and its economic links with the *Urbs* became ever closer. This led to the upgrading and consolidation of pre-Roman transport networks, which were essential for the circulation of persons, goods and troops, especially the aforementioned *via Heraklea* (later rebranded *via Augusta*), and to the opening of new routes. In this context, urban nodes acquired renewed importance: harbours,[61] such as *Hispalis*, *Onuba*, *Gades* and

56 Hirt 2010: 274–278.

57 Blázquez et al. 2002.

58 Rico 2010; Arboledas et al. 2017.

59 Pérez Macías and Delgado 2012; Garrido 2011.

60 Concerning the establishment of frontiers, see Gómez Fraile and Albadalejo 2012: 415, n. 242, with previous bibliography.

61 Campos and Bermejo 2017.

Valentia, which linked land and fluvial routes with sea trade; inland crossroads, such as *Segobriga*, on the road between *Complutum* and *Carthago Nova*; and river ports, such as *Corduba, Emerita* and *Caesaraugusta*.

The strategic value of the Roman cities, as communication hubs in a complex transport network, is prompting interesting, but problematic, studies about networks and connectivity. These studies[62] rely on variables such as *Closeness Centrality* and *Betweenness Centrality*, which can theoretically indicate the main axes of communication and the hierarchy of settlements within a given settlement framework. The models are based on efficiency in communication and transport, the relevance of which for the ancient world is still to be proven. For this reason, subjective and less 'pragmatic' criteria are being incorporated into the analysis,[63] for example those based on 'Agent-based Modelling' and the notion of 'Social Network'.

6 The Consolidation of the Model under Caesar and Augustus

The Caesarian-Augustan municipalisation programme, which coincided with the final conquest and consolidation of all Iberian territories, aimed to rationalise this complex picture, but also to extend juridical privileges to a greater number of communities and thus to introduce an extra factor of stability. Communities could be promoted for geostrategic, economic or political reasons. Caesar undertook a programme of creation of privileged communities, colonies and municipalities, which had already yielded good results in the Italian peninsula, especially since the enactment of the *Lex Plautia Papiria* in 89 BCE and the integration of Italian communities.

The new Caesarian and Augustan colonies included both civilian colonies and veteran colonies. The first veteran colonies were created from military *praesidia* in the context of the civil wars, for instance *Norba Caesarina* (Cáceres), *Scallabis* (Santarem) and *Pax Iulia* (Beja).[64] Later, after the end of the last campaigns of conquest, Augustus created several *coloniae* to settle his veterans, including *Emerita Augusta* and *Caesaraugusta*, strategic bridgeheads over the *Ana* (Guadiana) and the *Iberus* (Ebro), respectively.[65]

62 For references see n. 8.
63 Horden and Purcell 2000; Graham 2006; Fousek et al. 2016.
64 Sayas 1985 (*Norba*); Fabião 2006: 123–124 (*Scallabis* and *Pax Iulia*).
65 These initiatives sought, on the one hand, to control territories more efficiently, but also to extend privileges to a larger proportion of settlements than theretofore, which is a reflection of greater internal stability (Espinosa and Abascal 1989: 39).

This programme also involved the promotion of a group of cities, both Roman foundations and former indigenous settlements, to the status of privileged community, which strengthened Roman political and administrative integration policies in the Iberian Peninsula. One of these cities was *Colonia Augusta Firma Astigi* (the *Astigi vetus* mentioned by Pliny, 3.12). The Republican phase of the city prior to the Augustan foundation on the *via Augusta* remains elusive, despite the intense archaeological exploration that has taken place in the last 20 years.[66] Other cities such as *Asta Regia* (Mesas de Asta, Jerez), *Urso* (Osuna), and *Acci* (Guadix) had important pre-Roman predecessors, but for the most part the evidence for these was excavated a long time ago and requires revision. Recent excavations have confirmed an important pre-Roman period for *Hispalis* (Seville).[67]

Municipalities (*municipia*), for their part, were created in already existing settlements, and no *deductiones* or land distributions were involved in their creation. It seems that the cities newly promoted to municipality included those which had a substantial proportion of *cives Romani*, in *conventus civium Romanorum*.[68] *Gades*, *Asido*, *Italica*, *Ilipa*, *Olisipo*, *Salacia*, *Baetulo*, *Saguntum* and *Bilbilis* are only some of the cities that were granted this privileged status in the programme put forward by Caesar and Augustus.[69]

The Augustan period is, therefore, key to defining the territorial strategies and urban planning in Hispania.[70] By this time, the conquest can be considered to have ended, at least from a political and propagandistic point of view, and the borders of the three classic provinces were fully settled,[71] as were the juridical *conventus*,[72] which were another instrument for administrative and territorial organisation (Fig. 6.3). However, as previously noted, it would be a mistake to think that the final territorial outline was the outcome of the implementation of a pre-designed Roman model that could be imposed on any newly pacified territory. Nothing could be further from the truth, as demonstrated by the large number of variables and factors that came into play. All of these factors need to be taken into account if an in-depth understanding of the dominant patterns and qualitative models is to be achieved. In general, important pre-Roman urban nuclei were consolidated, middling centres grew (forming

66 García Dils 2015.
67 Escacena and García Fernández 2012.
68 Brunt 1971/1987: 244–245.
69 Bendala 1990.
70 Bendala 2003: 30.
71 Abascal 2015.
72 Dopico, 1986; Le Roux 2004; Cortijo 2007; Dopico and Santos Yanguas 2012; Ozcáriz 2012; Santos Yanguas 2017: 238–243.

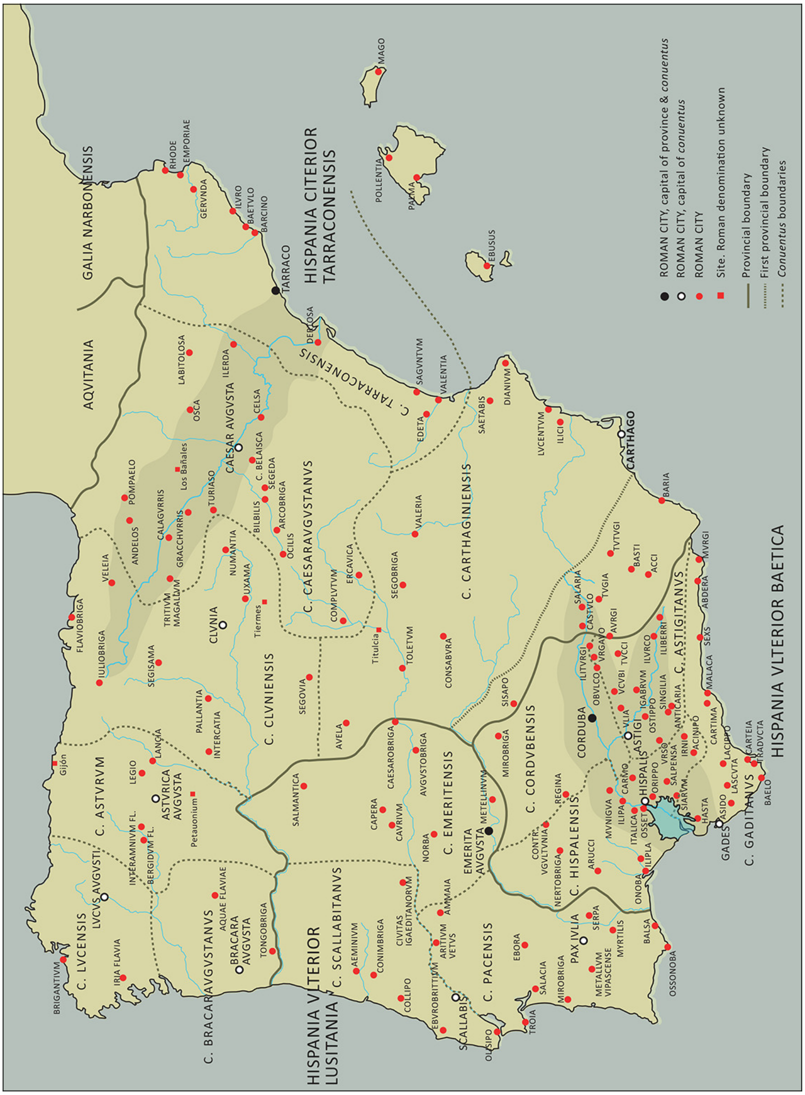

FIGURE 6.3 Administrative division of Hispania in the early imperial period and distribution of the main cities

increasingly complex networks, characteristic of a more intensively interconnected society), and new settlements were created.

A more detailed regional analysis reveals that the names of most cities in the Plateau had indigenous roots—*Segobriga*, *Ercavica*, *Bilbilis*, etc.—which is probably indicative of their origin. This, again, emphasises the survival of pre-Roman territorial patterns, a typical feature of Roman policies. Some of the well-known conflicts recounted by the sources reflect episodes in which the Romans forced indigenous hilltop settlements—the *oppida* model which characterises Hispanic protohistory—to descend to the plain.[73] There is little doubt that this measure sought not only to control these communities more efficiently, especially in areas where Roman domination was contested, such as Celtiberia and the Ebro Valley, but also to implement new territorial strategies focussed on the exploitation of agricultural resources and a more efficient articulation of settlements around lines of communication.

The activity of Augustus in the north-western regions, which were the last to join Roman Hispania, is especially significant. The policy in this region was not to disturb the traditional settlement pattern in *castros*[74] (equivalent to the Latin *castella*?), as the basic form of settlement in a dispersed habitat.[75] This interpretation is compatible with the emergence of new settlements, such as Viladonga (Lugo),[76] which not only had all the traditional features of *castros*, but which also responded to the traditional settlement pattern of the region. The Roman presence is more noticeable, however, in the promotion of some of these centres, which became veritable regional centres: for example, Santa Trega, Sanfins and Briteiros.[77] This policy was complemented by the creation of several new cities, which soon became key elements in the articulation of the territory at different levels: administrative, fiscal, economic and mili-

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73 Flor. 2.59.6.

74 For a general overview of settlement in the north-west in the Iron Age ('cultura castreña'), with new and interesting interpretative proposals with regard to cultural dynamic flows, see González Ruibal 2008.

75 Traditionally, it has been claimed that the survival of these organisational models can be related to the emergence, in funerary inscriptions in the northern Plateau and Green Spain, of a symbol resembling an inverted C. There is little doubt that this symbol is associated with the community to which the deceased belonged, their aristocratic origins and their kinship and patronage relationships (Sastre 2002: 41–42). For the nature of these communities and their organisation, as reflected in the epigraphic record, see the useful study by Ramírez (2013).

76 For the *castro* of Viladonga, see Arias Vilas 2013; more generally, for settlement patterns in the Galaico-Roman north-west, see Sánchez-Pardo 2010.

77 Parcero et al. 2007: 217 ff.

tary.[78] These new cities included *Lucus Augusti, Asturica Augusta* and *Bracara Augusta*.[79] Repeating a pattern that we have already seen elsewhere in the Iberian Peninsula, these centres were connected to pre-Roman settlements.

In the north-west, Rome was especially active in the gold-mining regions (Fig. 6.4). In contrast with other mining areas, which were exploited by means of *publicani* and *societates*, in the north-west the state exploited the mines directly, with the support of military contingents. This is reflected in the foundation of *Asturica Augusta* and *Legio*, both of which began their history as military camps.[80] Settlement hierarchy and specialisation in the region of Las Médulas is of enormous interest.[81] In recent decades this area has been subject to intense research, including landscape analysis, with very valuable results. Among the trends detected are the abandonment of settlements after they became redundant in the new regional economic structure (Corona de Corporales), the adaptation of other settlements to the new conditions (Orellán), the emergence of new mining *castros* (Corona de Quintanilla or Castro de Corporales), and the construction of Roman settlements for the administrators (Las Pedreiras del Lago, Carucedo) who imported their Italian habits and lifestyles. More recently, a similar process has been identified as having occurred around the gold mines of Valabelleiro.[82] The *castro* of Pelóu is directly related to metal-processing activities. A *domus*, organised around a peristyle in pure Roman style, was built in the first century CE inside Castro de Chao Samartín,[83] which, aside from this Roman interloper, never shed its *castro* identity.

78 See the proceedings of the symposium about the city in the north-west, edited by Rodríguez Colmenero 1999.

79 In addition to Rodríguez Colmenero 1999, more recent monographic studies about *Asturica, Legio* and *Lucus Augusti* may be found in Beltrán and Rodríguez Gutiérrez 2012.

80 Morillo 2007.

81 Sánchez Palencia 2000; Sánchez Palencia et al. 2006; 2017: 868–871; Sastre 2012.

82 A *tabula censualis* found in this area, specifically in the *castro* of Pelóu, has been interpreted as referring to a levy—perhaps also with a tax purpose—of over 40–50 individuals (both indigenous and Roman) with Latin *cognomina* who manned the settlement (Villa et al. 2005: 257–260). It was a long-lived mining post that has been dated to the Roman period (Sánchez Palencia 1995; Sánchez Palencia et al. 2006).

83 One house (Villa 2016), which has been interpreted as the residence of Roman officials who managed the *ciuitas* Ocela, presents a first phase, dated to the first half of the first century CE, with classic Roman features. The building was transformed during the Flavian period and abandoned shortly thereafter, at the turn of the second century CE.

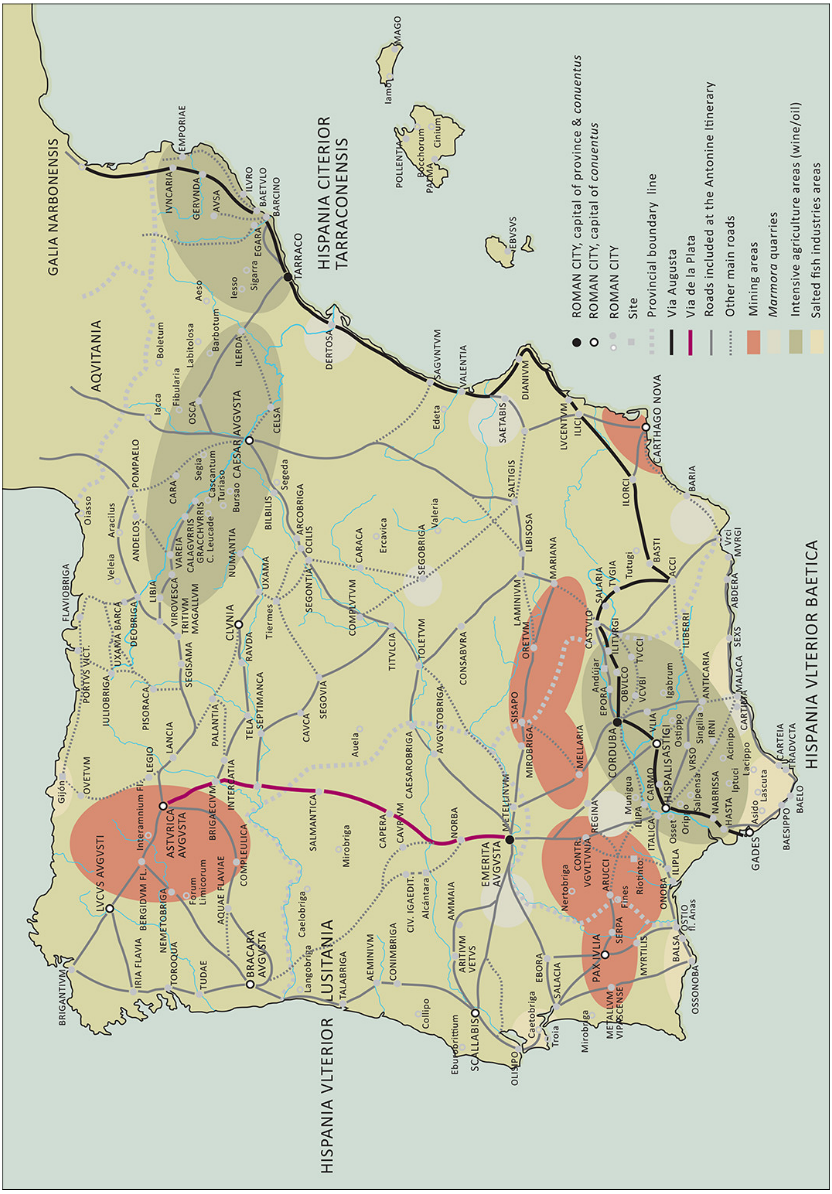

FIGURE 6.4 Most important economic resources of Hispania in Roman times

7 Conclusions: Some Regional Patterns

In the south and the Levant, the consolidation of urban networks and the previous settlement pattern can be noted. The better-placed centres with regard to mining, agricultural and fishing resources were promoted, and the communication network upgraded. The key factor is thus the promotion of regional centres, which play a fundamental role in the articulation of the diverse landscape. Pre-Roman institutional and organisational features were preserved and incorporated into the new order. Most centres were ethnically hybrid, with a moderate influx of Italian settlers organised around *deductiones* or *conventus civium Romanorum*, in a predominantly indigenous context.

In the interior, pre-Roman cities were promoted as communication hubs, which, initially, facilitated the conquest of the west and the north-west, and later became the basis of the rational organisation of the new provinces. A handful of major rivers also became important communication routes, and a number of important cities were founded near economic resources (e.g. *Segobriga* near quarries for *lapis specularis*). Caesar and Augustus undertook a more comprehensive and rational organisation of the Iberian territories, including the foundation of several colonies that consolidated and refined previous territorial balances (e.g. *Emerita* and *Caesaraugusta*).

In the north/north-west, a twofold trend can be noted: the previous settlement pattern was left largely undisturbed, but several indigenous centres were upgraded to become regional centres, and new privileged cities were founded to provide Rome with the administrative structure it needed to stabilise these territories, which were both the most remote and the last to be incorporated into the provincial system.

The next step in the long evolution of Iberian urban centres was the Flavian reforms. Communities became more robust with the consolidation of the local aristocracies—especially owing to the extension of the *ius Latii*—and the increasing integration of Italian families, which ultimately led to the appointment of a Spanish-born emperor.

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CHAPTER 7

The Urban Landscape of Roman Central Adriatic Italy

Frank Vermeulen

1 Introduction

The region of central Adriatic Italy is marked not only by its geographical diversity and its subdivision into distinct valley-dominated territories, scattered between the Apennine Mountains and the coastal strip, but also by a palimpsest of ethnic and cultural communities living here at the onset of Roman military intervention around 300 BCE. From the start these factors of diversity and heterogeneity heavily influenced the particular character of the urbanisation processes in this part of central Italy, characterised by its somewhat peripheral position in respect to epicentre Rome. At the same time the region, with its natural outlook towards the sea, was always conditioned by openness to the eastern Mediterranean and its innovative impulses and economic opportunities. The Roman drive that initiated a five-centuries' process of town formation and consolidation accelerated in unequal ways certain major adaptations in settlement organisation, which had been underway since the fifth century BCE, when first Etruscan and Greek and later Celtic influences modified indigenous dynamics. Even if the gradual establishment of more consistently structured agglomerations, increasingly invading the coast and other lower-lying zones of the landscape, and often coexisting with central settlements on hill-site locations, had not yet led to real urban morphologies, a certain pattern of things to come was gradually emerging by the time Rome decided to stop the growing Celtic influence over northern Italy. So-called 'proto-urban' developments in certain positions on the coast and in the major inland districts of Umbrian, Celtic and Picene lands, where socio-economic flows were increasingly being controlled and regulated, later persisted in full Roman urbanisation efforts. In effect, it was only in the wake of military and political annexation of the indigenous Italic and Celtic territories during the first decades of the third century BCE, that natural attempts by communities to centralise were enhanced and partly replaced by a typical Roman colonial framework based on coastal and frontier control. This quite sudden artificial and exogenous impact resulted in the creation of the first real urban centres

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in the region, in a gradual development of a dense network of towns, and ultimately in the cultural annexation of the central Adriatic into the growing urban landscape dominated by Rome in Italy.

The main objective of this contribution is to decipher the regional characteristics of the urban system in Roman central Adriatic Italy.[1] Chronologically I will focus mostly on the period from the early third century BCE, when the Romans started to take over the region, to the third century CE when the long process of town formation and consolidation gradually came to a halt, and entered a phase of regression and deconstruction. As we will see, only from Augustan times onwards was the urban network fully in place here, so most of the identified regional characteristics apply only to the final decades of the Republic and to Imperial times. The region itself is defined here more by physical geography than by ethnic or administrative borders, such as by the well-known Augustan regional subdivision of Italy. This region, bordered clockwise from North to West by the southern fringes of the Po Plain, the Adriatic Sea, rugged south-eastern Abruzzo and the Apennine mountain range, can be regarded as a unit composed of some physically definable territory. It consists essentially of a relatively narrow part of central Italy, characterised by evenly narrow WSW-ENE-oriented river valleys crossing a fertile mountainous to undulating landscape, before reaching a quite homogeneous and predominantly flat coastline. Even if the region can be divided into three main belts—the coastal border, the hilly inland and the mountainous backbone—this landscape triad covers the whole area in a similar way. Studying the historically quite coherent urbanisation over this region as a whole makes a lot of sense, and is much more logical than restricting study to the early Imperial administrative units. For those nostalgically attached to the ancient Roman administrative units we specify our delimitation as follows: with the towns of *Ariminum* in the north and *Hatria* in the south the delimitation of the study region coincides almost completely with the original Republican *ager Gallicus* (or from Augustus onwards the eastern part of *regio VI Umbria*) and *regio V Picenum*, even if the area around Rimini was from Augustan times incorporated into the more northern *regio VIII Aemilia*.

However, before attempting to define some regional characteristics of the urban system here, we wish first to describe briefly the recent evolution of Roman urban research in this part of Italy, remind the reader of the main phases of the very gradual Roman colonisation and integration process here,

1 The core of the contribution is based on work for my recently published book (Vermeulen 2017). The reader is kindly referred to this volume for a more in-depth analysis and documentation of Roman urbanisation in this region.

and sketch the general evolution of town formation in the region, which eventually established the full urban network under consideration.

2 Modern Urban Archaeology in the Region

As is well reflected in the important collective work edited by Mario Luni about the archaeology of the current Marche region—the core of our own study area—the frantic documentation activity of hundreds of local researchers since the eighteenth century has accumulated a wealth of data about the Roman towns of central Adriatic Italy.[2] Through a series of other publications spread over the last 25 years,[3] where we see good attempts at synthesising knowledge about Roman urbanism in certain parts of this area, we can also fully understand the difficulties encountered here by a modern archaeological approach. Many contemporary observations in towns with continuity—and this is still the majority of towns in our region—are very partial and limited, and the full scientific information required can be documented only in certain favourable conditions. It is problematic that the difficult and rather sparse excavations in current town centres over a long period created a bias towards monumental architecture, public buildings, and the Imperial period, but provided much less information about the oldest phases of Roman towns or pre-Roman antecedents, the precise extent of the urban centres, and crucial aspects of urbanism such as functional zoning and the nature of domestic architecture. Another important bias for the archaeological study of town contexts is the nature of the spoliation activity: some materials were recuperated intensively, while others which were of no value for the Medieval and later builders in that area, were left *in situ*.[4] This is also evident through the use of durable materials and techniques in the past: while pre-Roman and early colonist structures were often ephemeral (e.g. wood, earthworks, tents, etc.), later constructions became more durable. But even in the more monumental phases there is evolution: especially from the reign of Augustus onwards, *opus caementicum* and brick were increasingly used for city walls and town buildings in this area. Long after the initial conquest phase, Roman knowledge of the local geology improved substantially and the better quarries were opened up. These were now being exploited with more efficient equipment, more financial means, and better transport modalities. In the Adriatic region this brought, for instance, a

2 Luni 2003.
3 See, for instance, Delplace 1993; Cardinali and Luni 2006; Perna 2012; Silani 2017.
4 Luni 2003.

shift towards the more widespread use of central Italian trachyte pavements for roads, as well as the import and use of North Italian building stones (e.g. marbles and breccias from *Luni*, Verona and Istria) and marbles from overseas (e.g. Greece).

Especially from the 1970s onwards, there was a renewed interest in the urban archaeology of the region. As part of the long tradition of urban studies dominated in the 1970s to 1990s by the 'Italian school', the central Adriatic region, with as its most inspiring researcher Nereo Alfieri, saw an increase in topographic studies in and around ancient towns.[5] At the same time the expansion of many modern towns increasingly threatened the archaeological record, and the enhanced activities by the superintendencies for archaeology in the concerned modern regions of Marche, Abruzzo and Emilia-Romagna could only partly cope with that. While the redevelopment of urban sites sometimes provided good opportunities for developer-funded archaeological investigation, contemporary use and occupation meant that these archaeologists could rarely choose the specific sites within urban environments that they wished to explore. In this context, the development of a focussed archaeological strategy for answering relevant questions about the nature of urbanism and town formation, was hindered and most archaeological work still concentrated on the towns with continuity of life. The perspective most frequently adopted there was the analysis of Roman urbanism by looking primarily at city layouts, using techniques such as planimetry and the graphical and strictly morphological analysis of town structures. This work mostly used modern morphological survival in the current cities, and cadastral and other maps for the reconstruction of town grids and modules, in particular in relation to rural infrastructures and roads, where survival can even be greater. Much of this useful work is, however, quite conjectural and leaves ample space for discussion and revision of hypotheses. The resulting proposals must in many ways be seen as working models for field testing and control, rather than urban realities ready for wider interpretation. And while in some cases, such as for the town centres of Rimini and Fano, this initial hypothesis building led to interesting confirmations in the field, some topographic proposals of the past nowadays meet partial if not complete rejection when confronted with new archaeological and stratigraphic realities.[6]

5 Alfieri 2000.

6 Rimini: Ortalli and Ravara 2004; Fano: Alfieri 1992. Recent intensive archaeological field operations on the ancient city site of *Sena Gallica* (Lepore et al. 2012), involving geophysical survey, coring and stratigraphic operations, have allowed archaeologists to reject various ear-

In the past decade more progress in crucial knowledge acquisition about regional urbanism has been reached, thanks to a landscape archaeology approach to the phenomenon of towns and their impact on the hinterland. In the 1990s there was a realisation in Italian archaeology that the same techniques which had spurred the study of the wider landscape also held out the promise of making a major contribution to our understanding of urban sites. In the peninsula this was greatly activated by landmark projects such as the study of *Falerii Novi* and later of *Portus*, as well as by the general refinement of geophysical techniques and aerial photography that could be used for the fine-grained analysis required to bring out details of an urban layout.[7] The consequence of all these developments, including the widespread use of GIS in archaeology, has been an upsurge in the non-destructive survey of urban sites, in central Adriatic Italy as elsewhere in the peninsula.[8] Large and complex urban sites, which had previously been studied with a piecemeal approach largely directed by the monument-based interests of earlier scholars, are now increasingly being 'scanned' with survey techniques to rapidly generate plans of partial or, in some cases, complete townscapes. This has also led to a revolution in how archaeologists approach urban sites, with survey techniques being used increasingly for the collection of more data about the extent, the internal organisation and even the chronology of the towns. It also led to investigations of the full range of urban sites available, and not just those in a good state of preservation or where financial means or the right administrative or scientific context were available to excavate certain parts of the city. Better and more reliable information about urban site size and layout, and sometimes even on early town development, can be found in the many deserted towns of this central Adriatic region. As almost half of the 43 town sites considered in this study were partly or totally abandoned or displaced after the Roman Imperial period, this archaeological approach can have a major impact here on regional urban studies. After the introduction of this strategy of survey from 2002 onwards by the Ghent University team in the towns of *Potentia, Ricina, Trea* and *Septempeda* in northern *Picenum*,[9] the approach has since then been applied by several teams working in recent years on a whole series of abandoned Roman towns and their hinterlands (e.g. *Suasa, Ostra, Sentinum, Forum*

lier propositions (e.g. Sommella 1988, Dall'Aglio et al. 1991), and to propose a now much more reliable new model.

7 Keay et al. 2000 and 2005; Corsi et al. 2013; Guaitoli 2003; Vermeulen 2013.

8 Central Adriatic Italy: Vermeulen 2017; Silani 2017. Non-destructive surveys of other urban sites: Christie and Augenti 2012; Johnson and Millett 2012; Vermeulen et al. 2012.

9 Vermeulen and Verhoeven 2006; Vermeulen 2013; Vermeulen et al. 2017.

Sempronii, Tifernum Mataurense), which before 2000 were known only via a few excavated 'windows' in their sometimes ill-defined town areas. A series of these partially or fully abandoned Roman towns are now being uncovered via intensive total surveys, integrated into some apposite excavations in carefully selected areas. Through such well-integrated strategies it is now not only possible to obtain good information about their size, general internal organisation, and functions during their heyday in the early Imperial period, but sometimes also to get a better understanding of the early phases of town formation, and of certain changes and sometimes radical shifts in the urban development of these centres. In this way it is now possible to derive a realistic hierarchy of town sites in the region, based on better estimations of size and associated population numbers, while also more meaningful observations are possible on the degree of urbanisation, the inter-relationship between urban centres in the region, urban networks and the integration or complementarity of towns with each other within the wider regional context.

3 The Main Colonisation Phases and the Evolution of Town Formation in Central Adriatic Italy

The evolution towards full urbanism in central Adriatic Italy, between the annexation of the western Umbrian territories around the end of the fourth century (e.g. the town of *Camerinum* in 310 BCE) and the turbulent phase of the Social War in the beginning of the first century, is not a gradual one that follows the stream of slow settlement dynamics this region knew before the coming of Rome. From an archaeological point of view no real cities existed in the region before 300 BCE, as we cannot (yet?) recognise here the trend seen in other regions of central Italy, of giving the larger agglomerations an external urban appearance, essentially by building massive fortifications around them, regulating an ordered pattern of houses and streets, and creating representative public spaces. We must consider therefore, that the process of full urbanisation here was still in an early and very immature phase by the time Rome intervened. Around 300 BCE a series of abrupt political and military events, followed by certain accelerations of the natural attempts by communities to centralise and organise their settlements in harmony with economic and social evolution, changed the course of history. The proto-urban and urban geography of the region looks very different two centuries after the initial conquest, even if the acquisition of models of urban organisation was very different from place to place, displaying an intraregional multitude of dynamics.

During its first phase the region's settlement system is shaken by the basic organisation, in the footsteps of the military apparatus, of a series of colonies on the Adriatic coast, seen as successful weapons used by Rome to take full possession of central Italy (Fig. 7.1). The testified foundation, between 290 and 264 of three Latin colonies (*Hatria c.* 290 BCE, *Ariminum* 268 BCE and *Firmum* 264 BCE) and two Roman colonies (*Castrum Novum c.* 290 BCE, *Sena Gallica c.* 290 or 283 BCE), which despite their different legal status seemingly have characteristics very similar to those of quite large population centres, generated a strategically well-balanced urban strip along the coast, controlling the sea and the now expanded easternmost part of the *ager Romanus*. These colonies were from the start fully urban: with city walls, an urban street grid and essential building infrastructure, which erased most of the earlier structures. The careful geometric regularity, with which these early colonies of the Adriatic were designed, reinforced and sometimes even updated the model that Rome had applied elsewhere. Excavations such as in *Sena Gallica* and *Ariminium* have shown that in a first phase these towns were dominated by housing facilities, even if still of a modest kind, but only gradually were the regularly designed and modulated plots filled up. The colonies soon become very centralised, closing and organising their new territory for systematic agricultural exploitation, even if the size and position of this territory could still be adapted in the future, and the surrounding landscape was not yet fully exploited. The nearby stretches of fertile land, however, were drained and simultaneously delimited, often in full association with the systematic town plan and the pioneer road system. It remains an object of study whether certain early treaties with the main pre-Roman centres or '*oppida*' of the region, in particular *Camerinum, Asculum* and *Ancona*, immediately speeded up on-going centralisation processes among the indigenous populations. So far, we lack archaeological proof for such a development before the second century BCE.

The Romanising effect on indigenous populations living around the colonies—especially deeper inland—is anyhow more a secondary effect, not part of the imperialistic plan of conquest and control, and it took many decades before this became visible in the material culture of these communities. When in the 230–220s BCE military intervention in the Po Valley necessitated more complete control of the central Adriatic sector, massive viritane immigration and accompanying road organisation produced a more intensive type of colonisation, which would more strongly influence developments in inland territories. In fact the process of populating the wider conquered central Adriatic territories directly possessed by Rome, with a massive influx of viritane colonists, started soon after the enactment in 232 BCE in the Roman senate of the *lex de agro Gallico et Piceno viritim dividundo*, an initiative of one of the

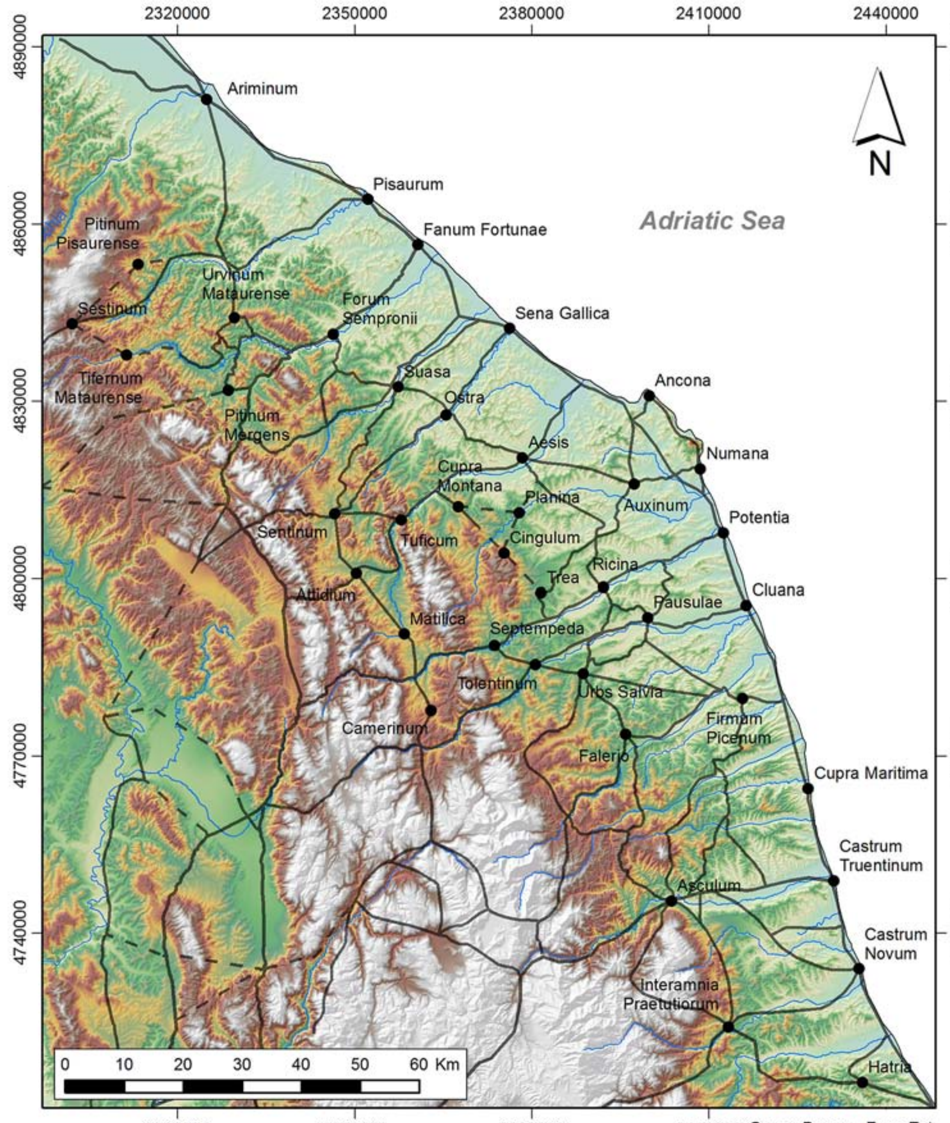

FIGURE 7.1 The fully developed urban network and road system of central Adriatic Italy in the early first century CE
F. VERMEULEN/D. TAELMAN

more active members of the populares faction, Gaius Flaminius. Together with the opening of the *Via Flaminia* in 220 BCE this created the definitive conditions for full rural infill by newcomers in this region. This in-depth process of taking a stronger grip on the land was further reinforced after Hannibal's departure from Italy in 203 BCE, with the additional fortification and urbanisation of new colonies on as yet undeveloped parts of the coast, and more inland districts around the middle valleys of river corridors.[10] The new colonial cities of the second-century wave (*Pisaurum* and *Potentia* 184 BCE, *Auximum* 174 BCE?, *Aesis* and *Pollentia / Urbs Salvia* around 130–120 BCE?) and the urban-like centre of *Forum Sempronii* probably all replaced small hamlets where Roman citizens had already established themselves. The strategic places at river mouths, or dominating fords on the main rivers, had already been occupied by small pre-Roman communities, who used the advantages of the crossroads between sea and river systems, and the connections of old land routes with places where the river was still easily navigable. Some of these second-century colonies near the Adriatic witnessed, shortly after their foundation, an unusually direct intervention by the censors in Rome. These noblemen individually enhanced the new towns with state funds, allowing us to see the essence of urbanism for Rome at that time: walls, a forum surrounded by shops, a temple of Jupiter, good water provisioning, and decent streets. The identical measures found by archaeologists involving the walls of these towns demonstrate not only that strict architectural schemes were applied, but even suggest that the same designers and builders were active.

This whole colonisation process, creating new towns and associated regulated landscapes, leant heavily on the development of a primary system of consular roads linking Rome with the Adriatic coast (*Via Flaminia* and *Via Salaria*), and secondary roads using the full potential of militarily and economically strategic river valleys and certain N-S interconnections (e.g. *Via Salaria Gallica*). These roads, consular and other, exercised much influence on the layout and planning of the new colonies, forming the backbone of future territorial organisation and networks, and created the basis for a series of incubation centres for new towns to develop in the future. The road organisation, together with choices made by the Roman state and the new migrant communities, to establish and develop small centres away from the colonial towns, was crucial for the fate of existing indigenous centres. Some gradually disappeared, while others took in the new influences, often at different speeds, according to their relationship with the conquering forces or their particular position in

10 Salmon 1969.

the landscape or district. Especially those that hosted *praefecturae*, the headquarters of those outlying offices (e.g. the tribunal) that were indispensable to civilian life far from Rome, had the best chances for survival and development. These *praefecturae* were obviously located where the population was densest and consequently became an incentive for the growth of such settlements. In the inland areas, many such *praefecturae* developed during the first century BCE, when urbanisation spread more widely, into autonomous cities with their own territory.

Only after the mid-second century do we see that—in certain former indigenous centres and small new agglomerations alike—the roots were present for a deeper urbanism mirroring the socio-economic urban models of Rome and of the nearby colonies. This model was applied in the centres of the region in a flexible way, and not always on the same scale or with the full range of options. The materialisation of a change in mentality, but most of all in the demographic composition of the centralised communities, can be seen via the absorption and application of urban features such as: stone town walls in *opus quadratum* technique, the regular structuring of houses and plots on the main road axis, more comfortable and better built housing, 'Latin' types of temples inside the agglomeration or town, etc. Some of these material developments were, of course, made possible due to the expansion of Roman power to the East, supplying the wealth to finance such initiatives in Italy.

Partly as a result of the nearby colonial munificence, and of the active integration of very Romanised veterans in many smaller centres, the existing and real economic foci of mostly inland communities eagerly absorbed the opportunities provided by the municipalisation process. A fully urban network now developed in inland territories in a relatively harmonious way within the regional comb-like setting of the narrow river valleys which link the Apennines to the Adriatic Sea. Most of the inland centres were located on, and grew around, positions along the key valley roads in this region, sometimes near crossroads with N-S oriented inter-valley axes. While the presence of sanctuaries that played an aggregative role may have been important in the choice of which settlements to develop, the economic functionality and in particular the service function for the roads and surrounding agricultural districts dominated their growth. A crucial factor in the transformation of many towns was surely the involvement of the elite, who through great deeds of euergetism took their chances for political promotion. The size of the urban centres was often relatively small, which leads one to suspect that this urbanising impetus meant that each single aristocratic group dug itself in around a future or developing urban nucleus.

The turbulent first century BCE brought the processes of town formation in central Adriatic Italy to a final phase, where urbanisation reached full maturity and a certain state of completion all over the region. With the exception of the high mountainous areas, the whole region now saw the creation of a dense network of central settlements, which deserve to be called 'urban' according to Roman standards, meaning they possessed or gradually acquired structures for autonomous political institutions (e.g. *curia, comitium, basilica*), had a structured marketplace (*forum*) around which most of the settlement's political, religious and commercial architecture was assembled, and a territory that was exploited by the settlement's inhabitants.[11] The events that triggered all this development were first the Social War (91–88 BCE), between Rome and certain of its Italic allies, and thereafter a series of civil wars between the main political leaders of the Roman state.

The outcome of all these internal military and social conflicts was colossal change in the central Adriatic region. Soon after the first operations of the Social War, the state had given Roman citizenship to all the Italic allies of Latin rights who did not take up arms against Rome, and the Latin colonies of *Ariminum* and *Firmum* were thus promoted to *municipia civium Romanorum*. Ancona must also have soon been inserted into the Roman system in this way. In some Umbrian territories directly east of the Apennines, such as *Sentinum, Pitinum Mergens* and *Camerinum*, the general concession of citizenship to Italic peoples by way of the *lex Iulia de civitate Latinis et sociis danda* of 90 BCE soon led to the transformation of existing centres into *municipia*.[12] In most of the Ager Gallicus and Picenum, however, the municipalisation of the population centres, finally replacing the *praefecturae*, took place only during the Caesarian reign, shortly after 49 BCE.[13] Most of the new borders of these *municipia* must have coincided with the former districts of the *praefecturae*, but the towns and agglomerations now received much greater independence to develop their urban and territorial infrastructure. This process of town development, and the acculturation effect it stimulated, was further reinforced in many towns when first Caesar and later Mark Antony and especially Octavian/Augustus organised new colonisation in the region, settling large numbers of veterans in the urban centres.[14] This not only led to the demographic growth and urban expansion of existing colonies, but also boosted several still-underdeveloped *municipia* in the region.

11 Sewell 2014: 14.
12 Sisani 2009: 227.
13 Paci 1998.
14 Keppie 1983; Patterson 2006: 488.

From then onwards and deep into Imperial times the creation of *urbanitas* was in many *municipia* a rapid affair. Their capacity to apply models from outside and adapt them to the exigencies of their cityscapes typifies the new towns of the region. This process provided central Adriatic Italy not only with a very dense network of small and medium-sized towns (see below), but at the same time created a remarkable diversity in town morphologies and local solutions. Various towns are marked by a flexible restructuring of earlier plans and of mostly organically grown small centres of the street-village type. The creation of wall circuits and gates, the elaboration of forum plazas, and the erection of temples and public buildings for dynamic communal and political life emulate examples from elsewhere. At the same time local solutions are found in accordance with the particular needs of the urban and surrounding rural communities. Part of the dynamics of this process were also clearly driven by a sense of competition among towns, that due to their proximity sometimes led to complementarity in building choices, as we can see from the introduction of spectacle buildings, probably associated with important market towns. The obvious diversity is also the result of the sustainability of these towns, which not only depended on logical economic factors and the creation of surplus in their hinterland or through commerce, but also on the presence or will of the local land-based elite or political heavyweights residing in the capital, to build and maintain the monumental fabric of these vibrant population centres.

4 Some Regional Characteristics of the Urban System in Imperial Central Adriatic Italy

Even if the archaeological evidence of the 43 historically attested Roman towns listed by Pliny in the central Adriatic region is quite unequally representative of the known settlements, and even if three towns remain practically unknown (*Beregra, Forum Brentani* and *Novana*), it can be assumed that by the time of Augustus they could all be called real 'towns' in their material appearance.[15] But how would we define the regional characteristics of their urban system in High Imperial times?

First of all, the general location of the known towns demonstrates striking 'network regularity' (Fig. 7.1). Apart from a somewhat higher density of towns in northern Picenum, particularly between the Esino and Chienti basins, the urban settlements seem very evenly spread over the whole central Adriatic

15 Plin. *NH* 3.110–114.

landscape. There is almost full coverage of towns located at the coastal mouths of the most important rivers, and where these are absent, often a *vicus* exists or came into being during Imperial times. In the middle valleys of many of the main rivers, somewhere halfway between the sea and the beginning of high mountain territory, towns are also regularly positioned. Again, an evenly spread, almost 'linear', concentration of towns can be seen at the eastern foot of the first mountain range and in the main N-S intra-montane basin directly east of the highest Apennine range. This generally even spread is evidently conditioned by the previously described system of parallel valleys between the mountains and the sea, and historically reinforced by the dense system of Roman roads that pass through them. It is certainly true that through the imposition of the consular road system and its *diverticula*, and via the foundation of colonies and the appointment of *praefecturae*, Rome had a very strong hand in this pattern, but apart from this aspect of efficient organisation, conditioned by the mentioned landscape factors and by the diachronic process of historical events and political decisions, the role played by indigenous factors must also be considered. Among the important autochthonous elements in the process of town formation I mention the existence of often economically driven pre-Roman agglomerations or population concentrations, which acted as natural 'central places' for territories, and probably the aggregative role played by old religious attraction poles, even if the latter still need better scholarly understanding. Whatever the multitude of explanations, the urban network developed here under Roman dominance might well, without hesitation, be cited as a good example of a homogenous and coherent system to politically and economically organise and manage a conquered, and since the Social War fully integrated, territory of the Roman State. Rational interdistances and viable locations near nerve-centre foci in the humanised landscape and in natural settlement chambers are, taken together, good guarantees for a *longue durée* survival of this urban network from the Late Republic, deep into the Imperial age. Even if uncertainties about the location of some centres persist, we can state that the distance between towns in the central Adriatic region averaged around 13 kilometres, or c. 9 Roman miles. This figure is only slightly higher than the corresponding figure for *Latium* and *Campania*, the two most densely urbanised areas of Italy, and almost the whole Roman Empire.[16]

It is, however, important to stress another crucial regional characteristic of the central Adriatic towns: they are on average much smaller than those in the

16 de Ligt 2012.

central Tyrrhenian regions near Rome, and very large towns with areas of more than 100 hectares known from these locations are definitely not present near the Adriatic. When we compare the estimates of town size, roughly in the time of Augustus and the Julio-Claudian dynasty, calculated on the basis of the most recent archaeological evidence of their intra-mural sections or of their supposedly inhabited area where no walls can be detected (Table 7.1), then it is possible to reconstruct a three-tier system or hierarchy for the central Adriatic region (after Vermeulen 2017).

Four towns could be described as large, as they have dimensions of 40 hectares and more: *Ariminum, Asculum, Hatria* and *Urbs Salvia*. The majority of twenty-one centres might be described as medium-sized towns, with average sizes of between 15 and 30 hectares. Some of these cover a good area, of 25 hectares and more (e.g. *Forum Sempronii, Ostra, Ricina*) and we must bear in mind that extra-mural areas can increase the figures of many, and in several cases High Imperial growth (outside the walls) has also been seen. It can, for instance, be assumed that an important harbour town like Ancona had extensive extra-mural activity areas, for living as well as for all kinds of economic activities. Finally, there is a group of eight attested small towns whose estimated size varies roughly between 7 and 11 hectares (*Aesis, Cingulum, Cupra Maritima, Falerio, Matilica, Interamnia Praetuttiorum, Trea, Urvinum Mataurense*). I assume that most of the towns for which we have no data could also be part of this group of definitely small urban centres.

Translated to population estimates, based on commonly used densities of 90–130 persons/hectare for small and medium-sized Roman towns in central Italy,[17] we can suggest very roughly the following average figures for our towns around the beginning of Imperial times, based on the estimated town sizes: 800–1,200 inhabitants for the small towns, 1,600 to 3,300 for medium-sized towns, and 4,400 to 5,000 for the larger towns. Including the towns without data among the small towns, then an urban population of roughly 90,000 to 100,000 for the whole region seems acceptable. Even if these numbers look impressive, intensive surveys have shown that the high densities of rural sites encountered in several central Adriatic valleys and comparison with other areas of central Italy allow us to accept that this urban population represents only c. 20% of the total population in the region at that time, accounting for a dense rural population compared to some other regions in Italy.[18]

17 de Ligt 2012.
18 de Graaf 2012; Morley 2011; Vermeulen et al. 2017.

TABLE 7.1 Roman towns and their modern names or current municipalities in central Adriatic Italy, with estimated town size in hectares in the Early Empire. Figures refer to the estimated walled surface area, excluding possible extra-mural habitation. If no wall circuit is known, an estimate of the size of the concentrated agglomeration is given.

Aesis	Jesi	10
Ancona	Ancona	12
Ariminum	Rimini	41
Asculum	Ascoli Piceno	44
Attidium	Attigio	10
Auximum	Osimo	16
Beregra	–	–
Camerinum	Camerino	20
Castrum Novum	Giulianova	15
Castrum Truentinum	Martinsicuro	25
Cingulum	Cingoli	10
Cluana	Porto Civitanova	–
Cupra Maritima	Cupra Marittima	17
Cupra Montana	Cupra Montana	22
Falerio	Piane di Falerone	9
Fanum Fortunae	Fano	25
Forum Brentani	–	–
Forum Sempronii	near Fossombrone	25
Firmum	Fermo	20
Hatria	Atri	45
Interamnia Praetuttiorum	Teramo	11
Matilica	Matelica	9
Novana	–	–
Numana	Numana	16
Ostra	near Ostra Vetere	25
Pausulae	San Claudio di Corridonia	20
Pisaurum	Pesaro	19
Pitinum Mergens	near Aqualagna	–
Pitinum Pisaurense	Macerata Feltria	–
Planina	San Vittore di Cingoli	–
Potentia	near Porto Recanati	18
Ricina	Villa Potenza	25
Sena Gallica	Senigallia	18
Sentinum	near Sassoferrato	15

TABLE 7.1 Roman towns and their modern names or current municipalities (*cont.*)

Sestinum	Sestino	–
Septempeda	near San Severino Marche	15
Suasa	near Castelleone di Suasa	19
Tifernum Mataurense	Sant' Angelo in Vado	15
Tolentinum	Tolentino	–
Trea	near Treia	11
Tuficum	Borgo Tufico	20
Urbs Salvia	Urbisaglia	40
Urvinum Mataurense	Urbino	8

It is clear that these figures can be further refined in the future, especially when linked with good information about architecturally identifiable details regarding the use of the inner urban space.[19] To illustrate this, it is sufficient to look at some cities where recent fieldwork combined with data from earlier excavations allowed a relatively clear identification of the size of their main public space—the *forum*—as well as of some additional common spaces and of a variety of regional house forms. The better data come from sites with good geophysical or aerial prospection results, such as *Sentinum, Ostra, Suasa, Trea, Ricina* and *Septempeda*.[20] When concentrating first on the *forum* plaza, the multipurpose square centralising communal life, we see that the dimensions of the recognised *fora* are generally in line with what is known from often somewhat larger Late Republican towns in central Tyrrhenian Italy—where towns of less than 2,500 families had *fora* with average dimensions of c. 90 × 40 m or an open space of c. 3,600 m².[21] The relative sizes of approximately 3 % of the total estimated urban surface in the three towns is also somewhat higher than the average of 2.5 % usual for Italian colonies.[22] Especially in *Trea*, where we have a good complete view of the forum, including the buildings surrounding its plaza, it is impressive to see that the whole forum complex uses more than 15 % of the total intra-mural space (Fig. 7.2). When the street network and a series of presumed public buildings (e.g. a *macellum*, a peripheral temple) are also included, the town space for public use probably amounts to more than 1/3

19 Vermeulen 2017. For a new model of calibrating this population density, see van Limbergen and Vermeulen (in press).
20 Vermeulen 2017; Silani 2017.
21 Ttxebarria Akaiturri 2008: 115.
22 Conventi 2004: 159.

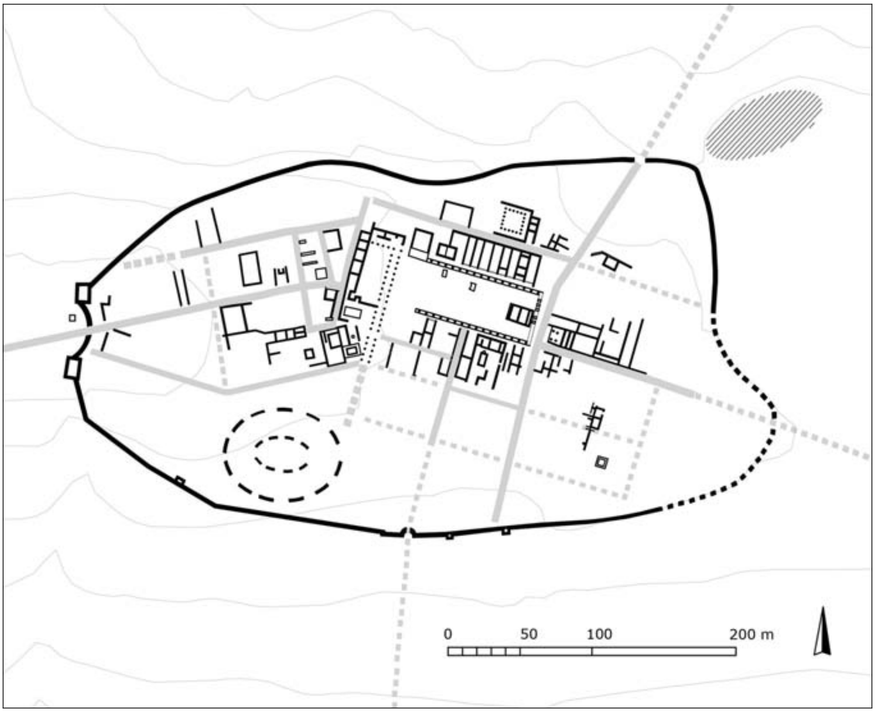

FIGURE 7.2 Interpretative plan of all known and presumed structures of the *municipium Trea*, mostly based on evidence from aerial photography and geophysical survey. The town plan points to an urbanisation scheme in two phases, with orientations along the main *decumanus* towards the west (Rome) and towards the east (*Potentia*). The interpretation of vague traces of an amphitheatre in the southern part of the town, and of a possible cemetery near the outgoing road to Ancona (towards the northeast) remains uncertain.
F. VERMEULEN/F. CARBONI

of the total intra-mural area. In *Ricina* and *Suasa*, on the other hand, it is mostly the very large buildings for spectacles that catch the eye (Table 7.2). Not only do both towns possess a theatre as well as an amphitheatre, located near the forum, but for rather small to medium-sized towns their spectacle buildings are large. The theatre at *Ricina* belongs to the group of medium-large urban theatres in central Italy, and neither amphitheatre, with lengths of almost 100 m, is smaller than comparable buildings in important large towns of the region, such as *Ancona* and *Urbs Salvia*.

It is evident that we are confronted here with the phenomenon of over-sizing of public spaces in demographically relatively modest towns. To judge by their size and monumentality these inland towns not only serviced the urban inhabitants but also the population of the surrounding countryside, and probably also

TABLE 7.2 Archaeologically or epigraphically attested spectacle buildings in the Roman towns of central Adriatic Italy (Vermeulen 2017). Some uncertain identifications mostly dating from the nineteenth century have been included.

Town	Amphitheatre	Theatre	*Campus*	*Circus*
Aesis		×		
Ancona	×			
Ariminum	×	×		
Asculum	×	×		
Auximum	×	×		
Camerinum	× ?			
Cupra Maritima	×		×	
Cupra Montana	× ?			
Falerio	×	×		
Fanum Fortunae	×	×		
Firmum	×	×		
Forum Sempronii	×	× ?		
Hatria	×	×		
Interamnia Praetuttiorum	×	×	×	
Numana	× ?			
Ostra		×		
Pitinum Mergens		× ?		
Pisaurum	×	×		× ?
Potentia		×		
Ricina	×	×		
Sentinum		× ?		
Suasa	×	×		
Trea	× ?		×	
Tuficum	×			
Urbs Salvia	×	×	×	
Urvinum Mataurense	×			

people living in nearby towns which did not have a theatre or amphitheatre of their own. In view of the high number of commercial buildings which have been identified in the well-studied *fora* of *Trea* (Fig. 7.3) and *Suasa* (with both *fora* having *tabernae*, with that of *Trea* possessing also a *basilica* and a *macellum*), the primary function of these public spaces as marketplaces for town and surrounding countryside is also indisputable. In *Ricina* remains of a large bath-

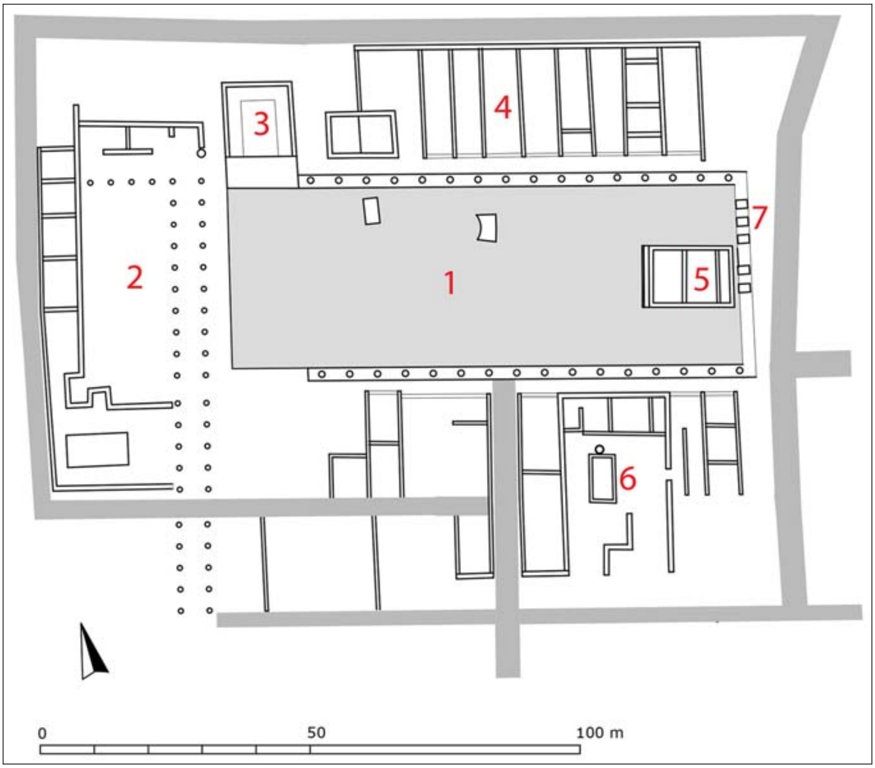

FIGURE 7.3 Interpretative plan of aerial photographs and geophysical prospection data from the forum of *Trea* and its surrounding street system. The main structures identified in the forum are: 1. Plaza, 2. *Basilica*, 3. *Curia*, 4. *Tabernae*, 5. Temple, 6. *Domus*, 7. Possible arch.

house and public cistern were discovered near the theatre, suggesting that on market days and at the time of religious festivities a large part of the population from the surrounding countryside needed to be serviced. The desire of a town to impress the traveller or visitor from other towns, clearly had primacy over the needs of the local inhabitants and the creation of an environment for social interaction in and around the forum. At the same time the public buildings attracting many people from nearby towns and the countryside, provided information about the status and cultural wealth of the inhabitants of a city.[23]

The colonial towns in the region were in general best provided with such an infrastructure for status display and large crowd interaction (Table 7.2). Due to the historical processes involving veteran colonisation in the second half of

23 Laurence 1999.

the first century BCE, several existing towns with colonial foundations, as well as a few others that had been promoted to this rank, were given a facelift and extended. This development concerned mostly the coastal colonies (*Ancona, Pisaurum, Firmum, Hatria, Fanum Fortunae, Castrum Novum, Ariminum, Potentia, Sena Gallica*), but a few inland centres also took part in the process (*Asculum, Falerio, Pollentia/Urbs Salvia*). Their urban change can normally be seen in several domains, especially in the spatial enlargement of an existing town area, sometimes including the (partial) reorganisation of the town grid and street network, and in a gradual endowment of new architectural features and buildings adapted to the needs and times, such as a better organised or larger forum, a *basilica*, temples, a theatre, an amphitheatre, etc.

Some of these adaptations fit very well with the national Augustan programme of urban renewal and his principles of monumentality and scenography,[24] as has been well archaeologically attested at the coastal cities of *Fanum Fortunae* (from around 30 BCE *colonia Iulia Fanestris*) and *Potentia* (Fig. 7.4), and even more at the totally transformed inland city of *Pollentia/Urbs Salvia*.[25] At the latter site the reign of Augustus coincides with a period of intense architectural dynamism and a large political and cultural will to completely change the face of the city. This improvement effort was much supported by the local elite in power, in tune with strong political and personal links with the *princeps*, who provided the necessary funds to attain this objective.[26] This is reflected not only in the particular change of name of the Republican colony, from *Pollentia* into *Urbs Salvia*, but most of all in the grandiose monumentality of the architectonic project initiated here to create a formidable forum complex, with characteristics that reproduce a certain imagery from the capital and stimulate firm integration with Rome and its cultural life.

In fact, two processes triggered the input of new wealth and the complete reorganisation of the urban centre: the arrival of the triumviral veterans and the new colonial assignations which obliged the town to reorganise its spaces and buildings in favour of the new colonists, and at the same time the promotion of several local elite families to senatorial rank. These two main evolutions are translated into a series of urban transformations initiated by Augustus, and finalised under the reigns of Tiberius and Claudius (Fig. 7.5). New town walls were built in connection with the existing road system of the *Via Salaria Gallica*, the street system was re-organised, the forum was extended and embel-

24 Gros 2000; Mayer 2007.
25 Vermeulen 2017: 117.
26 Delplace 1993; Perna 2012.

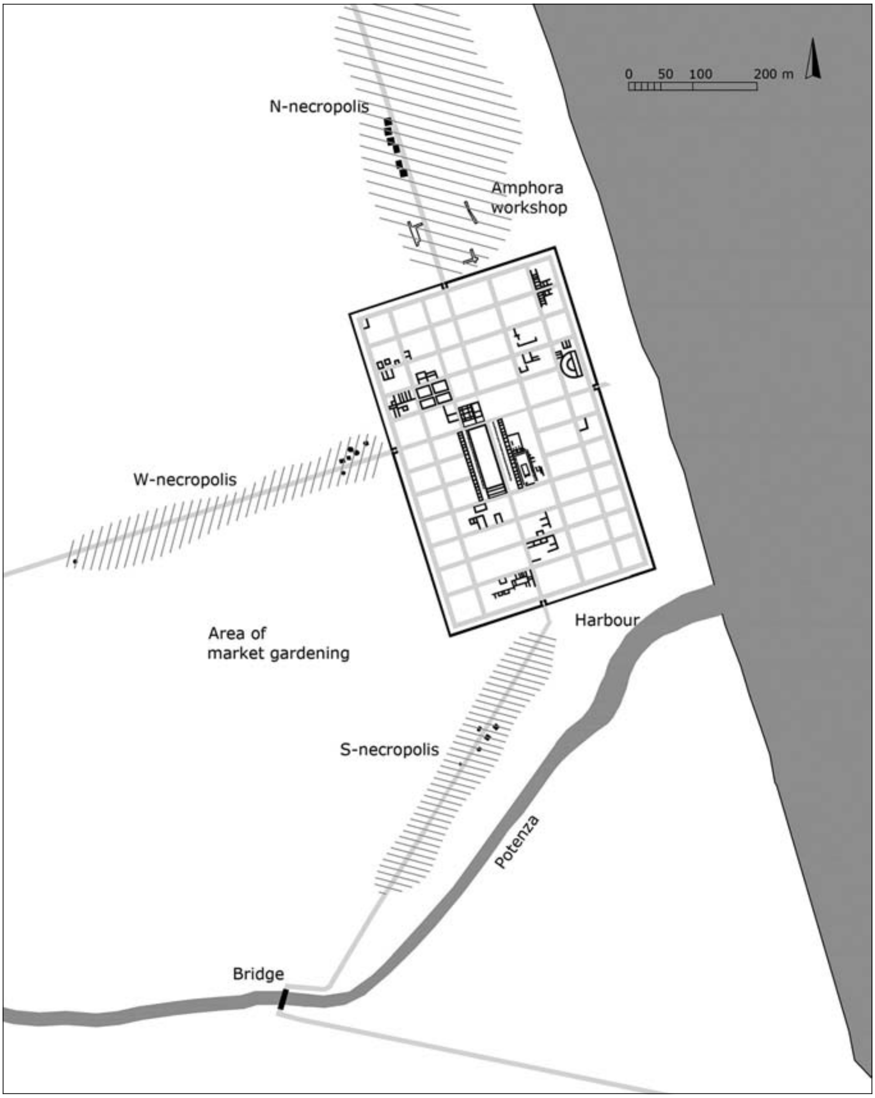

FIGURE 7.4 Plan of *Potentia* and its suburban areas, after the expansion of the coastal colony under Augustus

lished with a monumental temple complex with cryptoporticus, while on the slopes above the forum an architectonic complex with theatre and terraces was created, which reveals the full acquisition and adaptation of Hellenistic models. In the extra-mural area a *campus* was also constructed during this period of intense building activity, while a large extra-mural amphitheatre was added to the town only in Flavian times.

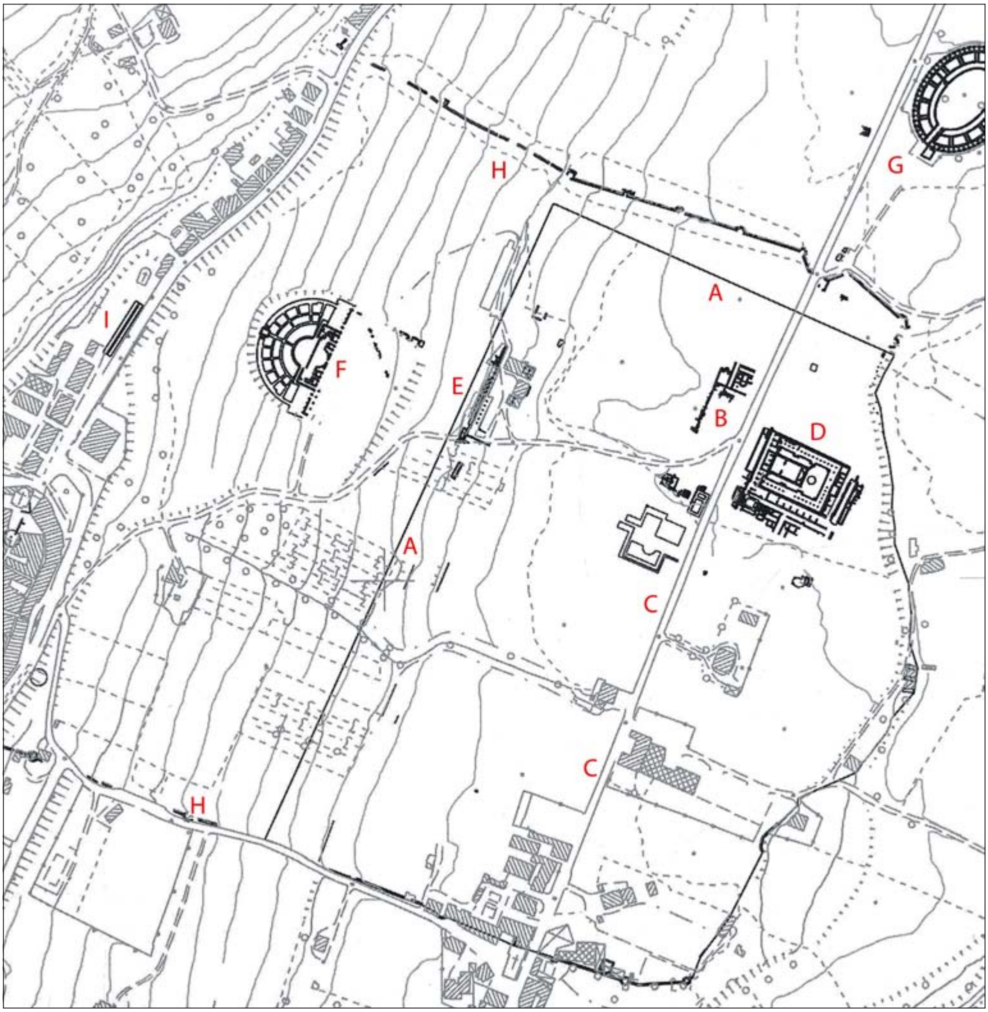

FIGURE 7.5 Plan of *Pollentia/Urbs Salvia* showing main urban features: A. presumed trajectory of the Republican city wall, B. forum, C. Via Salaria Gallica and principal urban artery. Imperial structures include: D. temple-*cryptoporticus* complex, E. *cryptoporticus*, F. theatre, G. amphitheatre, H. Imperial city wall, I. cistern.
AFTER PERNA 2012

The role of these local elites aspiring to social promotion is also well evidenced in the architectural plan of the smaller inland *municipia*. We already mentioned the investment in oversized public infrastructure, but proof of this can probably also be found in the domestic (semi-) public sphere. It surely is no coincidence that several of these small urban centres demonstrate the presence of very large *domus* at the heart of the town. Excavations and surveys in

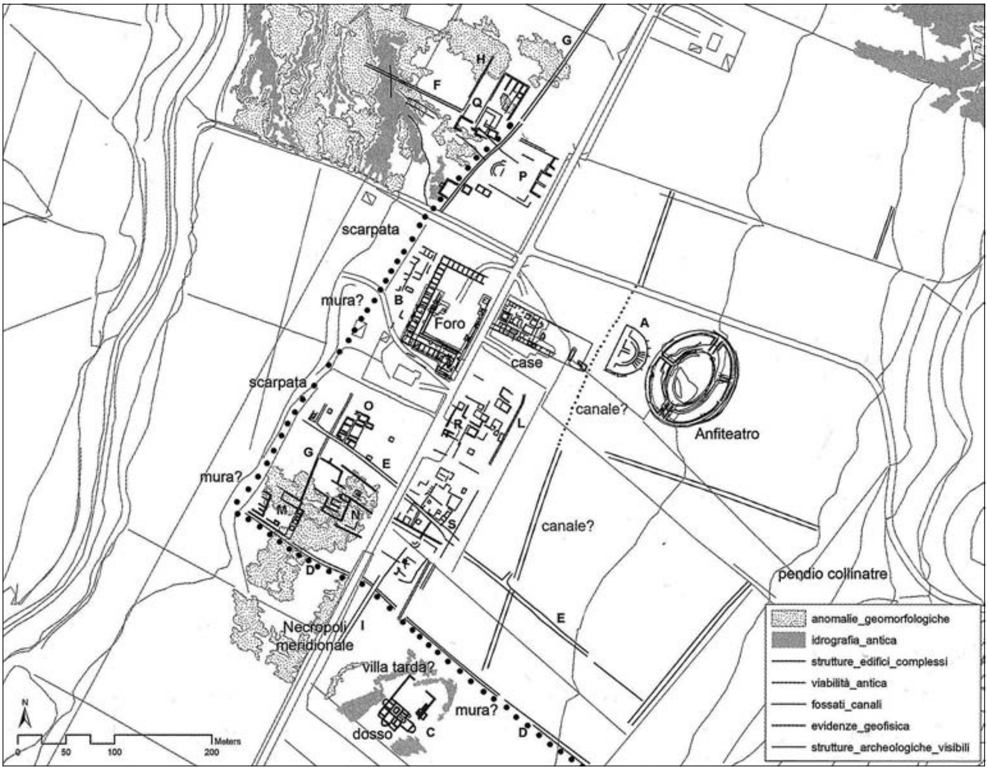

FIGURE 7.6 Interpretative plan of the town of *Suasa*, based on excavation and remote-sensing data. The town's orientation was determined by the (still existing) valley road to the coast. The dotted line marks the trajectory of a possible town wall.
AFTER GIORGI 2012

towns like *Suasa* (Fig. 7.6), *Trea, Forum Sempronii* and *Septempeda* provide good examples of this widespread phenomenon.

At *Suasa* for instance we see that around the mid-first century CE two large buildings for spectacles were added to the core of the town—a theatre and an amphitheatre—creating a definitive setting for the needs of full urban life in this mid-valley *municipium*.[27] The remarkable central position, between these buildings and the forum, of the excavated house of the *Coiedii*—a rich Late Republican *atrium* house that was transformed into an extremely wealthy *domus* in the course of the second century CE—might well be related to the financing and planning of these grand public amenities. It is likely that this and similar examples in other towns are the houses of the local aristocracy

27 de Maria 2010.

and/or higher magistrates dominating political life. This matches well with the evidence from inscriptions, here as in many Italian towns, that it is mostly private euergetism that has permitted the construction, renewal and upkeep of the impressive and seemingly over-sized monumental panoply in these inland *municipia* with rapid town formation and self-sustained urbanism.[28] The new *urbanitas* bestowed upon these towns is surely in part due to the actions of these figures and their *gens*. Their statues and many inscriptions,[29] together with imagery that showed allegiance to Rome and its rulers, must have adorned many of these impressive buildings, and games and banquets organised by the elite in and around such complexes underlined their leading role in local society. But while the impetus for the construction of the very costly new monuments, such as theatres, amphitheatres and large buildings on the forum may have come from the local elite, the financing and delivery depended on the patronage of outsiders, namely the political elite in Rome itself. Many of these politicians had been strongly involved in the development of the region since the Late Republic, no doubt using the support of the local populations as *clientes* for their political careers in Rome. We can mention the role played by the *gens Pompeia*, which had a wide clientele particularly in towns such as *Auximum*, *Cingulum, Firmum* and *Cupra Maritima*, but also other very influential figures can be included in a long list: Lucius Equitius in *Firmum*, Quintus and Titus Labienus in *Cingulum*, Publius Ventidius in *Asculum*, etc.[30]

It is likely that certain towns where the public infrastructure was somewhat disproportional compared to their real importance as population centres and markets for a wider territory—and it seems the central Adriatic region had quite a few—did not do well once the system of euergetism weakened and elite spending partly shifted to villas and family tombs in the countryside. Evidence provided by large-scale excavations in town houses in the region is still too thin to examine in depth, whether a certain negligence of public infrastructure starting in the second century CE was paralleled by a degradation of city housing. Some excavated examples, in *Ariminum*, *Potentia*, *Suasa* and *Sena Gallica* might suggest a drop in the quality of certain house infrastructure (e.g. flooring) during the latter part of the second century CE, but I think it is too early to discern a real and widespread trend here.[31] Only if and when good

28 Gros 2000.

29 e.g. Mayer 2007.

30 Luni 2003; Bandelli 2007.

31 *Ariminum*: Ortalli and Ravara 2004; *Potentia*: Percossi Serenelli 2001: *Suasa*: de Maria 2010; *Sena Gallica*: Lepore et al. 2014.

and representative data become available about private residences in town and in the countryside—and several recent urban surveys have started to provide more plans of all kinds of housing in and near towns (e.g. at *Pitinum Pisaurense, Tifernum Mataurense, Suasa, Ostra, Trea, Potentia, Ricina, Septempeda*)—will it be possible to evaluate certain shifts of spending, as well as the rate of transformations that take place in the towns at the threshold of the third-century crisis.

5 Conclusion

This region of central Adriatic Italy has in recent years become a good case study for the understanding of Roman regional networks. In this contribution we have focussed essentially on archaeological aspects of urban topography and regional landscape, yet also a more material-culture approach, considering flows of goods between the towns, or one that focuses mostly on the epigraphic evidence of the region, could contribute considerably to characterising this regional system located not far from the heart of the Empire. Our analysis has certainly shown that the region is dominated by a dense network of moderately sized urban centres, and even the few larger cities are not really to be considered very important population centres. Most coastal colonies seem in their early phases to be dominated by medium-scale housing, but even here more hierarchy seems to appear in the use of domestic space from the time of Augustus onwards. Many cities and towns display the well-known phenomenon of over-sizing of public spaces: for rather small to medium-sized towns their fora and spectacle buildings are larger than average and the space available for middle- and lower-class housing seems quite restricted. In general the central Adriatic towns seem to be servicing at least as much the surrounding countryside as the urban inhabitants living there, and the dense rural population as well as town dwellers of nearby centres without certain facilities of their own (e.g. theatre, amphitheatre) could also easily reach these facilities. Most of the smaller urban agglomerations of the region might, therefore, be better defined as service centres rather than large population centres. The high number of commercial buildings in some of the studied towns shows that their primary function as marketplace for town and surrounding countryside, and probably as a focus of religious festivities, is indisputable.

All in all we perceive a strong regional diversity in the city models applied in the region. It seems that the capacity of these small centres to apply urban models from outside and adapt them to the exigencies of their cityscape typifies many inland towns of the region. This process provided central Adriatic

Italy with a remarkable diversity in town morphologies and local solutions, with quite a number of towns that have grown out of road-village types of settlements, located in optimal sites within the narrow river-valley corridors that they control. The relatively small urban size and high density of dispersion within the regional network, as well as the limited carrying capacity of their (partly upland) territories, restrained most of the inland centres from developing into major cities. These factors, together with the predominantly rural destiny of the communities living in the area before the Roman conquest, and certain landscape factors (e.g. valley-floor locations), are probably also responsible for the limited growth and early demise of many centres of the interior, even if well-nestled aristocratic families artificially boosted the urban fabric of many sites. The coastal towns, however, which are mostly of colonial origin, expanded rather more along the lines of urban developments in central Tyrrhenian Italy and often prospered longer, thanks to externally driven elite investment, especially in wine production and other commercial enterprises, which allowed them to profit more from extensive international connections. Unlike many inland centres with their self-sustained urbanism, these coastal cities could take greater advantage of a very substantial veteran influx from the mid-first century BCE onwards, and of the high-level interconnectivity characteristic of their productive sea-links with Rome and the Mediterranean.

We are convinced that future archaeological research should progress along the lines drawn above, combining intensive integrated urban surveys with more focussed excavations in crucial places, for understanding chronological, spatial and cultural evolutions connected with the urbanisation process. Such a more landscape-based regional approach has much to offer for a better understanding of urban realities in the wider Roman world, as it allows us to more fully appreciate the wide diversity of town and city contexts, to distil from the broad evidence a 'regional profile' and to contribute to our understanding of how Romans and indigenous people alike were flexible in adapting to local situations and to cultural contact, either forced or welcomed.

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CHAPTER 8

The Impact of Roman Rule on the Urban System of Sicily

Luuk de Ligt

1 Introduction*

The principal aim of this paper is to study the gradual transformation of the urban system of Sicily which took place after the imposition of Roman rule in the second half of the third century BCE. The most recent study covering this topic is Roger Wilson's survey article which carries the ambitious title 'Changes in the pattern of urban settlement in Roman, Byzantine and Arab Sicily'.[1] Wilson's treatment can only be described as absolutely excellent, but more than thirty years have passed since its publication. In this paper I want to re-examine the evolution of Sicily's urban system in the light of new archaeological research carried out during the past three decades. My second goal is to provide an explanation, or explanations, for the striking realignments in the urban system of the island which can be observed between late-Classical times and the early third century CE.

2 Sicilian Cities in the Late Classical and Early Hellenistic Periods

In the final quarter of the fourth century BCE almost all regions of Sicily were dotted with cities (Fig. 8.1). The largest urban settlements of the island had been founded as Greek colonies. Of these colonial cities Syracuse had by far the largest walled area. In late Classical and early Hellenistic times the outer walls of this city enclosed no less than 1,600 hectares. Of course, the size of the built-up area, comprising public, sacred and private buildings, was much

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1 Wilson 1985.

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smaller. In the recent literature Drögemüller's estimate for the maximum size attained by the occupied area, 325 ha, is still accepted as broadly correct.[2] While I have no quarrel with this figure, I would like to point out that Syracuse seems to have reached its greatest extent during the reign of Hiero II (270–215 BCE), when the urban districts of Acradina and Neapolis were expanded to areas previously occupied by extra-urban cemeteries.[3] In the late fourth and early third centuries BCE Syracuse is likely to have occupied less than 325 ha.

The area enclosed by the wall of *Akragas* was 450 ha, roughly three and a half times smaller than that protected by the outer fortifications of Syracuse. However, since more than half of this area (c. 250 ha) appears to have been occupied, the built-up area of *Akragas* was only one third smaller than that of the largest city of late-Classical and early-Hellenistic Sicily. In 262 BCE or 261 BCE *Akragas* was captured by the Romans, who are said to have enslaved more than 25,000 of its inhabitants.[4]

Of the other coastal cities *Camarina* and *Selinus* were considerably smaller than Syracuse and *Akragas* but still impressive. *Camarina* had a walled area of 145 ha of which about 50% (72 ha) might have been occupied.[5] The walls of *Selinus* enclosed some 110 ha, of which about three quarters (80 ha) are thought to have been built over.[6] To these Greek cities we should add the Punic port city of *Lilybaeum*. Existing estimates for the walled area of this city range from 77 ha to 80 ha, but based on the most recent reconstruction of the course followed by the Punic fortifications an estimate of c. 90 ha seems more realistic.[7]

Camarina was destroyed by Dionysius I of Syracuse, but revived by Timoleon. In the 280s BCE the Mamertines of *Messana* destroyed the city. In 258 BCE it was captured by the Romans, who sold most of its inhabitants into slavery.[8] Archaeological research carried out in the late 1990s has shown that the city quickly recovered from this severe blow and continued to flourish at least until the late third century BCE.[9] *Selinus* also suffered heavily during the First Punic War. In around 250 BCE the Carthaginians razed the city to the ground and removed its population to *Lilybaeum*. Unlike *Camarina*, *Selinus* did not recover. Strabo includes it in his list of deserted cities.[10]

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2 Drögemüller 1969: 113–114; Hansen 2006: 42.
3 Gentili 1956.
4 Diod. 23.9.1.
5 Muggia 1997: 97; cf. Mertens 2006: 193 and 351, Abb. 625.
6 Zuchtriegel 2011: 117.
7 Giglio 2006.
8 Diod. 23.1.4 and 23.9.5.
9 Mattioli 1995; di Stefano 2000–2001.
10 Diod. 24.1.1; Strabo 6.2.6.

In various publications Classical *Gela* is credited with a built-up area of about 105 hectares.[11] In reality the fifth-century city appears to have been much smaller. More than a century ago Paolo Orsi suggested that the Archaic wall enclosed the same area as the medieval wall circuit (25 ha) plus the acropolis (c. 20 ha). Excavations carried out in the area to the north of the Archaic city have shown that by the late fifth century the city had expanded northward to the area where the 1891 railway station would be located, increasing the size of the area occupied by the walled city and the northern suburb to about 60 ha.[12] Within this area the acropolis (c. 17 ha) does not seem to have contained any buildings other than the Doric temple, the *Athenaion* and a couple of *thesauroi*. These figures imply an estimate of only 45 ha for the built-up area of the Classical city.[13]

In 405 BCE *Gela* was destroyed by the Carthaginians but the city was rebuilt by Timoleon in 338 BCE. The fortifications of the re-founded city extended westward as far as Capo Soprano, enclosing large areas previously occupied by the necropoleis of the Archaic and Classical periods. The size of the area enclosed by the new city walls may be estimated as approximately 190 ha.[14] The area of the Archaic city was re-occupied,[15] and new residential quarters appeared on the western half of the plateau. The nucleus of these new quarters seems to have occupied an area of about 25 ha, but this figure rises to c. 40 ha if various less densely occupied areas are included.[16] In addition, a new residential

11 This estimate can be traced back to Orsi 1906: 11–12, who calculated the size of Classical *Gela* based on a length of 1,500 m. and a maximum width of 700 m. It is repeated in many later publications, including Bérard 1957: 232, Martin, Pelagatti, Vallet and Voza 1980: 561, Coarelli and Torelli 1984: 113–158, and Muggia 1997: 76.

12 Northern suburb: Fiorentini 1994.

13 The archaeological evidence does not support the high estimate of 200 ha for Classical *Gela* provided by Hansen and Nielsen 2004: 194, which might have been inspired by Beloch 1889: 66, Orsi 1906: 12, or Bérard 1957: 232. Beloch's estimate was based on map XII at the end of Holm 1871, which assumes that the Classical wall enclosed the entire area between the acropolis and Capo Soprano. Holm's reconstruction is roughly correct for the period between 338 BCE and 282 BCE.

14 For the course of the Timoleontic wall see Orlandini 1956: Fig. 3; id. 1957: map on pp. 50–51.

15 Area of Archaic city re-occupied: Orlandini 1956: 167–168. Adamesteanu 1960 thinks that the area of the Classical *proasteion* was enclosed by Timoleontic wall, but the excavations carried out in the area of the old railway station have revealed no signs of re-occupation after 405 BCE (Fiorentini 2002: 147–156; cf. Orsi 1906: 562).

16 According to Orlandini 1956: 173, and id. 1957: 166, these quarters occupied a vast area between Capo Soprano, Piano Notaro and the modern Piazza San Giacomo, but he also regarded the zone between the modern Via Palazzi, Via Scavone/Viale Indipendenza and Via Manzoni (c. 15 ha) as the principal habitational nucleus (id. 1956: 166–167). Panvini's discussion of the finds from Via Candioto, Via Morselli and Via Meli (Panvini 1996: 106–

quarter (occupying less than 1 ha) appeared on the northern terraces of the acropolis. All in all, the built-up area of the Timoleontic city might have been as large as 65 ha. After Agathocles had taken possession of the city and killed 4,000 of its citizens in 311 BCE, the residential quarter on the acropolis seems to have been abandoned. To judge from the large numbers of objects belonging to the period 310–287 which have come to light on the western part of the plateau, the Timoleontic quarters of Capo Soprano and Piano Notaro now became the most vibrant parts of the city. In the area of the Archaic city occupation also continued, though perhaps on a reduced level.[17]

Sometime between 287 BCE and 282 BCE the city of *Gela* was completely wiped off the map.[18] It is not entirely clear how this happened. According to one theory, the Mamertines from *Messana* destroyed the city, after which Phintias, the tyrant of *Akragas*, removed the remaining inhabitants to the new city of *Phintias* (Licata). Another possibility is that the Mamertines destroyed the city after its population had been deported.[19] For the purposes of this paper the only conclusion that matters is that from the late 280s onwards *Phintias* emerged as a new city on the south coast of Sicily. Some two hundred years after its foundation this city appears in the Verrine orations as a port from which tax grain was exported, but as late as the nineteenth century Licata still lacked a good harbour.[20] Even at the height of its development Hellenistic *Phintias* might have occupied no more than 30 ha.[21]

Other large or medium-sized coastal cities included *Himera* (with a built-up area 82 ha if the lower city is included, but only 32 ha if it is excluded),[22] *Messana* (inhabited area 60 ha in the fifth century),[23] *Katane* (walled area 60–65 ha),[24] *Heraclea Minoa* (walled area 60–70 ha during the fifth century, but

107) suggests that the densely occupied zone was considerably larger than this. In the area of Capo Soprano Adamesteanu (1960) posits the existence of at least four 'decumani' separated from each other by a distance of 212 m., implying a minimum width of 650–700 m. for the Hellenistic quarter as a whole. My estimate of 40 ha is based on the map in Orlandini 1957: 50–51, on the assumption that occupation to the east of the modern Via Cartesio and Via Butera was sporadic (e.g. Orsi 1906: 272; Congiu 2015: 529).

17 Diod. 19.107.3–4. Eastern quarter abandoned: Orlandini 1956: 173.

18 Orlandini 1957: 170–171, surveys the exiguous evidence for continued occupation during the third century BCE.

19 Diod. 22.2.2 and 23.1.4. Cf. Panvini 1996: 102; Zambon 2004: 464.

20 Cic. 2 *Verr*. 3.192; Purdy 1840: 172.

21 La Torre 2006: 84, Fig. 2.

22 Mertens 2006: 191–192.

23 Fischer-Hansen et al. 2004: 235: 50–60 ha.

24 Tortorici 2008: 118 and 122, Fig. 35, estimates the size of the walled area as only 34 ha; but see Frasca 2015: 169, for a higher (and more realistic) estimate of 60–65 ha.

walled area 30–35 ha and built-up area c. 20 ha after its refoundation by Timoleon),[25] *Megara Hyblaea* (61 ha, of which 25 ha might have been occupied)[26] and *Naxos* (inhabited area 35 ha).[27] In Carthaginian Sicily *Panormus* had a walled area of about 36 ha.[28]

Of these cities *Himera* was annihilated by the Carthaginians in 409 BCE. A few years later the survivors were resettled at nearby *Thermae Himeraeae*, on the opposite bank of the river *Himera*.[29] *Naxos* was destroyed by Dionysius I in 403 BCE. According to Diodorus, the surviving Naxians were resettled in *Tauromenion* in 358 BCE.[30] There is no reason to reject this story, but excavations carried out at the site of ancient *Naxos* have revealed that a small part of the classical city continued to be inhabited.[31] *Messana* was destroyed by the Carthaginians in 396 BCE and rebuilt on a smaller scale by Dionysius I. The wall circuit of the new city might have enclosed an area of approximately 25 ha.[32] *Megara Hyblaea* was destroyed in 483 BCE, re-built by Timoleon and again destroyed by the Romans during the Second Punic War.[33] To judge from the archaeological evidence available at present, the new *polis* of *Tauromenion* did not take off before the third quarter of the third century BCE.[34] In around 300 BCE it must have occupied less than 20 ha.

During the Classical and early Hellenistic periods the interior districts of Sicily were also dotted with cities. Some of these had been founded as Greek colonies or sub-colonies, but others were Hellenised settlements of indigenous origin. On average the cities and towns of the interior districts were smaller than their coastal counterparts, but the former group includes a significant number of cities which occupied more than 20 hectares. Examples include *Murgantia* (Morgantina), with a walled area of 78 ha (of which c. 57 ha

25 Fischer-Hansen et al. 2004: 197; Hansen 2006: 106–107; and map 6 at the end of Gabba and Vallet 1980.

26 Hansen 2006: 42.

27 Fischer-Hansen et al. 2004: 219; cf. Mertens 2006: 40: 40 ha. The line followed by the northern section of the city wall remains to be clarified.

28 Belvedere 1987.

29 Diod. 13.61–62; Cic. 2 *Verr.* 2.86.

30 Diod. 14.59 and 16.7. I have assumed that *Tauromenion* became a self-governing *polis* around this date (cf. Fischer-Hansen et al. 2004: 231), but the dearth of fourth-century material suggests the late Classical city was considerably smaller than its Roman successor.

31 Lentini 2001: 13–16.

32 Diod. 14.54–58. Cf. Wilson 1990: Fig. 134.3.

33 Livy 24.35.

34 Campagna 2012: 169.

might have been built up),[35] *Leontini* (walled area 60 ha),[36] *Kasmenai* (walled area 60 ha, built-up area at least 45 ha),[37] *Segesta* (walled area 55 ha), *Hippana* (walled area 30–35 ha, built-up area 25 ha),[38] *Iaetas* (walled area 40 ha), *Hadranum* (walled area 60 ha of which c. 30 ha were occupied), *Entella* (walled area 40 ha of which 27 ha were occupied),[39] *Acrae* (walled and inhabited area 35 ha),[40] and *Assorus* (walled and inhabited area 30 ha?).[41] Of these cities *Kasmenai* is thought to have been abandoned in the course of the fourth century BCE.[42]

In addition to these large and medium-sized cities, the inland districts contained large numbers of fortified hill-top settlements. Some of these settlements had been founded as garrison settlements (*phrouria*) by various tyrants of the Greek cities of the coastal districts with the aim of controlling the peripheral parts of their territories, but at least some of these military settlements also functioned as civic communities. Therefore it is almost impossible to draw a clear boundary line between *phrouria* and dependent *poleis*.

It is even more difficult to classify the hill-top settlements of the regions inhabited by the *Siculi*, the *Sicani* and the *Elymi*. While in the territories of at least some Greek *poleis* a distinction can be discerned between the dominant city, on the one hand, and dependent *poleis* or *phrouria*, on the other, many fortified hill-top settlements of indigenous origin occupied areas of between 5 ha and 15 ha. Under these circumstances it is generally impossible to trace hierarchical relationships between settlements. Without secure evidence of such relationships we cannot rule out the possibility that the dense settlement systems which can be reconstructed for some parts of inland Sicily consisted of a series of autonomous units rather than of a small number of dominant centres exercising control over multiple 'subordinate' agglomerations and their territories.

35 Raffiotta 1996: 73: built-up area 50 ha; Stone 2014: 12: 57 ha. Cf. Lee 2014: 10: 39 ha of domestic space.

36 According to Frasca 2012: 176 *Leontini* occupied c. 60 ha between the early sixth and mid-third centuries BCE. Felici and Buscemi Felici 2004: 42 provide an estimate of c. 70 ha for the area occupied by the city at the height of its development. The estimate of 40 ha provided by Fischer-Hansen et al. 2004: 210 seems too low.

37 Hansen 2006: 42.

38 Vassallo 2012: 210.

39 Size of walled area: Nenci 1996: 129; built-up area: Vaggioli 2001: 61.

40 Fischer-Hansen et al. 2004: 190. As they point out, *Acrae* seems to have been founded as a military settlement, but it might simultaneously have been a dependent *polis* in the territory of Syracuse.

41 Wilson 1990: 149.

42 Collura 2012.

Since many of the hill-top settlements of the landlocked districts had less than 10 hectares of built-up space and also because farming seems to have been the primary occupation of a large proportion of their populations, it does not come as a surprise to find them described as 'fortified villages' ('villaggi fortificati') rather than as 'towns'.[43] However, as the examples of *Iaetas* and *Hippana* show, some indigenous hill-top settlements had impressive public buildings, such as monumentalised *agorai* and theatres, and it seems a safe bet that future research will reveal at least some further examples.[44] In this context it should be remembered that Cicero refers to the *palaestra* of the small town (*oppidum tenue*) of *Bidis* in eastern Sicily.[45] More generally, from an archaeological point of view many of the fortified hill-top settlements of the land-locked districts of Classical and early-Hellenistic Sicily look similar to the small *poleis* of Arcadia and other parts of mainland Greece. While some scholars classify the small fortified mountain sites of Classical Greece as 'villages with a small fortified citadel', others see them as representing a specifically Greek form of urbanism in which a large proportion of the farming population lived in 'small towns'.[46]

In his account of the First Punic War Diodorus reports that 67 'cities' (*poleis*) sent ambassadors to deliver their communities to the Romans after the consuls of 263 BCE had captured *Hadranum*.[47] Since the numerous cities which remained under Carthaginian control as well as all cities which were subject to King Hiero II of Syracuse are excluded from this tally, this passage may be interpreted as pointing to the existence of a large number of 'cities' in mid-third century Sicily. Unfortunately, there is no way of telling which types of settlement Diodorus, or his source, had in mind.

Another important literary clue is Livy's assertion that following the fall of *Akragas/Agrigentum* in 210 BCE 66 *oppida* fell into Roman hands after they had been betrayed or captured or had surrendered themselves (Livy 26.40.14). As Scramuzza pointed out long ago, this figure does not include *Messana*, *Enna*, *Lilybaeum*, *Drepanum*, *Tauromenium*, *Netum* or the recently captured cities of Syracuse and *Akragas*.[48] Therefore it seems reasonable to infer that late-third-

43 Muggia 1997: 102.

44 In an article on the *agorai* and *fora* of Hellenistic and Roman Sicily, Roger Wilson suggests there might have been as many as 155 cities (*poleis*) and an equal number of *agorai* on the island at the start of the Hellenistic period. See Wilson 2012: 245, based on id. 2000b.

45 Cic. 2 *Verr.* 2.53.

46 Cf. Maher 2017: 32, on the Arcadian mountain sites of Teuthis, Nestane and Halous, which feature among the *poleis* of Classical Arcadia (Nielsen 2004: 512, 523 and 533), but which have also been described as 'villages with a small fortified citadel'.

47 Diod. 23.4.1.

48 Scramuzza 1937: 328.

century Sicily contained at least 74 (66 + 8) 'cities' or 'towns'. However, since the term *oppida* may refer to all kinds of settlements, including fortified villages, even this cautious conclusion is not altogether unproblematic.

The only possible conclusion is that neither the literary sources nor the archaeological data currently available for the fortified hill-top settlements of the interior districts of early-Hellenistic Sicily allow us to draw a clear dividing line between 'hill-top towns' and 'fortified villages'. For this reason my reconstruction of the 'urban system' of Sicily in around 300 BCE takes in *all* fortified hill-top settlements which have produced evidence of occupation in the final quarter of the fourth century BCE (Fig. 8.1).[49] I have no doubt that future research will reveal some of these settlements to have been undistinguished places with little (or no) monumental architecture, few traces of elite dwellings and limited evidence of occupational diversity. It bears repeating, however, that many of the small *poleis* of Archaic and Classical Greece also appear to have been thoroughly agrarian. In that sense the wide-ranging approach adopted in this section does not give a misleading picture of 'urbanism' in Sicily at the end of the fourth century BCE.

In order to convey an impression of the quantitative properties of the urban system of early-Hellenistic Sicily, all cities and fortified hill-top settlements which existed in around 300 BCE have been assigned to six different size brackets (< 20 ha, 20–40 ha, 40–80 ha, 80–160 ha, 160–320 ha and > 320 ha) based on the size of their built-up areas. Many publications on the cities of Classical or early-Hellenistic Sicily provide separate figures for the sizes of walled and built-up areas, or contain maps from which rough estimates can be derived. In a

49 Most of the city locations shown on this map are those of the *Barrington Atlas*, but *Noae* has been tentatively placed at Monte Catalfaro (despite its proximity to Mineo), mainly because the settlement of Monte Iudica no longer existed when the *theorodokoi* list of c. 230–210 BCE was drawn up. In order to give an impression of the number of towns and 'town-like' places, a handful of settlements which cannot be located precisely have been assigned to one of the more plausible locations suggested by the existing literature, without any claim to novel insights or a high degree of reliability. The settlements in question are: *Echetla* (in the border area between *Leontini* and *Camarina*), *Ergetium* (Ferla?), *Herbita* (Monte Alburchia?), *Paropus* (Monte Riparato di Caltavuturo?), *Petra* (Castronovo di Sicilia?) and *Schera* (Montagna Vecchia di Corleone?). *Bidis* has been placed at Poggio Bidini and *Aetna* at Paternò, on the assumption that Pliny's *Hyblenses* lived at *Hybla Heraea*. For references see Appendix. Unfortunately, Fig. 1 in Bintliff 2018 conveys a false impression of my reconstruction of the network of towns and 'town-like' settlements in early-Hellenistic Sicily. Bintliff's map is based on the concept of 'self-governing town'. While this concept works reasonably well for the first 250 years of the Roman-imperial period, its usefulness as a tool for understanding the settlement system of Hellenistic Sicily is highly doubtful.

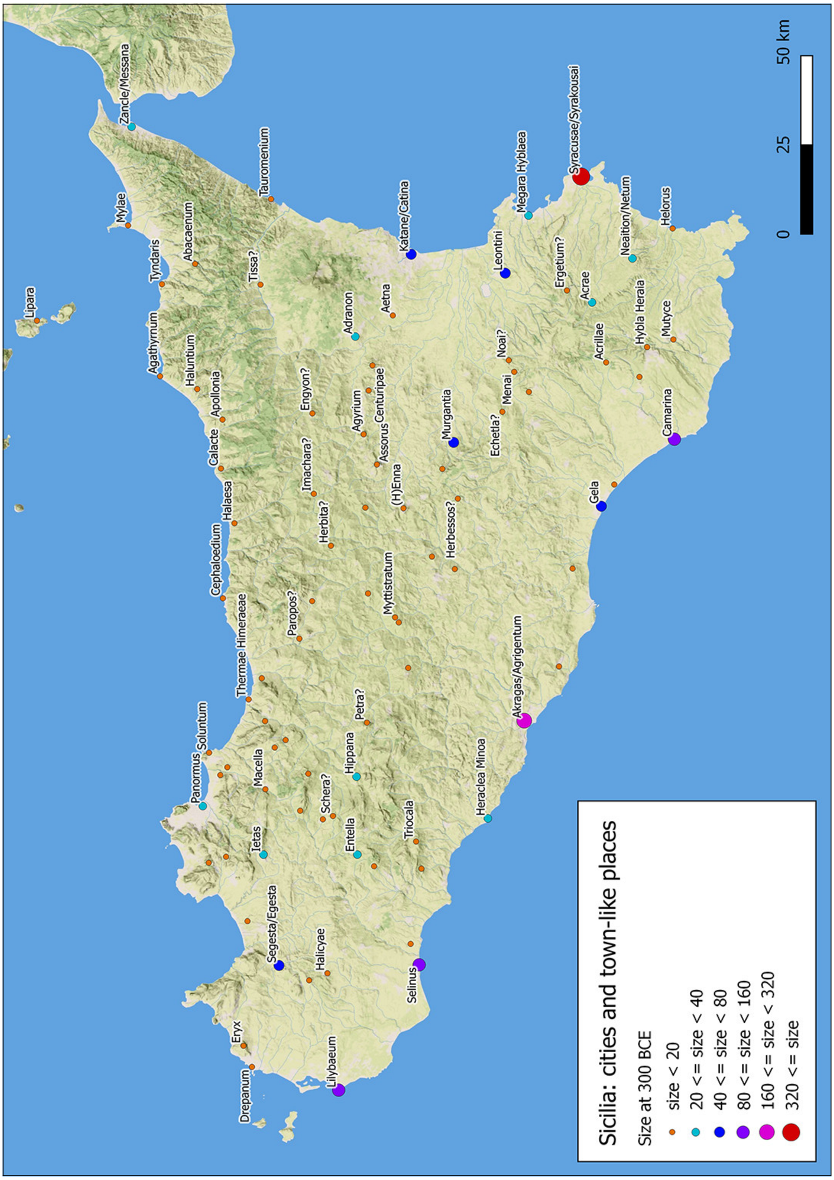

FIGURE 8.1 Towns and 'town-like' settlements in Hellenistic Sicily, c. 300 BCE

considerable number of cases only the size of the walled area can be estimated. In these cases it has been assumed that 70 % of the walled area was covered by domestic or public buildings, except in the case of cities with walled areas in the 120–500 ha range, where I operate with a percentage of 50 %, based on the well-investigated cases of *Camarina* and *Akragas*.[50]

It appears clearly from the map that the largest cities of early-Hellenistic Sicily were situated on the central south coast and on the south-east coast. Eight medium-sized cities (40–80 ha) were also situated on the coast or in the fertile areas to the south and south-west of Etna. The vast majority of those cities situated along the eastern part of the north coast or in the interior districts of central or western Sicily had less than 40 ha of built-up space, but since such cities were numerous, the urban system of the island as a whole can be described as quite dense, with inter-city distances rarely exceeding 25 km.

3 The Cities of Sicily under Roman Rule: Definitional Problems

Both during the Republic and in the imperial period the Roman administration was based on a clear distinction between 'self-governing communities', which had their own territories and played an important role in the collection of direct taxation, and 'subordinate communities' which were situated in the administrative territories of other communities.

If the label 'cities' is reserved for those settlements of Roman Sicily which were central places of self-governing communities (on the assumption that these places were most likely to display urban features, such as monumental buildings and elite houses), the best starting point for an attempt to estimate the total number of Sicilian cities is a passage from Cicero's Second Verrine Oration. Here we are told that each Sicilian city elected two censors for the purpose of assessing municipal taxation rates, and that the total number of censors stood at 130.[51] From this it follows that in the 70s BCE censors were elected in 65 Sicilian communities. Since the provincial governor did not have authority

50 In his book on the demography of the Classical Greek world, Hansen (2006: 46) assumes that in *poleis* belonging to the 10–150 ha bracket about half of the intramural space was occupied by domestic buildings. While this assumption might be broadly valid for cities belonging to the 120–150 ha bracket, the examples of Selinus and various other Sicilian cities suggest a higher proportion of built-up space for many cities occupying between 10 ha and 120 ha.

51 Cic. 2 *Verr.* 2.137.

over the internal administration of the three *civitates foederatae* of *Messana*, *Tauromenium* and *Netum*, the actual number of self-governing communities must have stood at 68.[52]

Various Sicilian cities were wiped out during the third and second centuries BCE, and it might be inferred from this that this entailed the disappearance of at least some self-governing communities. There is, however, clear evidence that this was not always the case. One of the Sicilian communities mentioned by Cicero is that of the *Gelenses* (2 *Verr.* 3.103). This shows that the *Gelenses* carried on as a self-governing community after the destruction of *Gela*. Therefore we can be certain that late-Republican Sicily contained fewer than 68 self-governing communities which contained a recognisably urban centre.[53]

During the early decades of the Principate the number of self-governing communities in Sicily appears to have been approximately the same as it had been in the late 70s BCE. Based on an Augustan source Pliny the Elder reports that the island (or the *provincia Siciliae* including Lipari and various other islands?) had five colonies and 63 other 'cities or communities' (*urbes aut civitates*), implying a total of 68 self-governing communities.[54] However, an inspection of his survey of the settlements and communities of the coastal and inland districts reveals that the figure of 68 is obtained only if the coastal settlements of *Portus Ulixis* and *Portus Naustathmus* are included. These two places clearly were secondary settlements rather than central places of self-governing communities.[55]

Some Sicilian communities referred to by Cicero do not appear in Pliny's list and are thought to have been downgraded to the status of subordinate communities. Examples include *Amestratus* (2 *Verr.* 3.88), which was a *vicus* of *Halaesa* during the Empire, *Capitium* (2 *Verr.* 3.103), which is believed to have become

52 Beloch 1889: 71–72. Cf. Prag 2014: 189.

53 My criteria for what constitutes a 'recognisably urban centre' include evidence for the erection or maintenance of public buildings, the presence of at least some elite dwellings and evidence of occupational diversity.

54 Plin. *NH* 3.88.

55 According to Beloch 1889: 73–74, Pliny's 68 Sicilian 'cities and communities' must have included *Abacaenum*, *Amestratus*, *Apollonia* and *Capitium* as well as the four insular cities of *Cossyra*, *Gaulos*, *Lipara* and *Melita*. He goes on to argue that the figure of 68 can be salvaged by eliminating *Portus Ulixis*, *Portus Naustathmus*, *Camarina*, *Mylae*, the *Naxii*, the *Selinuntii*, the *Zanclaei*, and the *Gelani* or the *Phintienses*. Finley 1979: 124 suggests that Pliny's 68 Sicilian cities and communities must have included the islands of Malta and Lipari. However, while Pliny mentions the *oppidum civium Romanorum* of *Lipara* in his survey of the islands, Melita appears only as an *insula*, alongside *Gaulos*, *Cossyra* and various smaller islands. In my view, we cannot rule out the possibility that Pliny did not find the figure of 68 in his source but calculated it himself.

a subordinate settlement within the territory of either *Engyum* (Troina) or *Imachara* (Vaccarra?), *Helorus* (2 *Verr.* 3.103), which became a village on the road between Syracuse and the southern coast, and perhaps *Apollonia* (San Fratello; 2 *Verr.* 3.103), which might have fallen under the control of *Haluntium*. To this list we may add *Abacaenum/Abacaena* (Casale di Tripi), which appears neither in Cicero nor in Pliny. The *Abacaenini* struck coins in the fifth and fourth centuries BCE, and the size of the area occupied by Hellenistic *Abacaenum* has been estimated as approximately 12 ha. In the early-imperial period the settlement zone seems to have shrunk to about 5 ha, but archaeological research has brought to light remains of an *agora/forum* and of at least one monumental building. The latter has been dated to the second century CE. The town's failure to make it onto Pliny's list has been interpreted as an indication that it was incorporated as a secondary settlement within the territory of the Augustan colony of *Tyndaris*.[56]

Pliny's use of the phrase 'cities or communities' strongly suggests that his list (like that of Cicero) includes at least some self-governing communities which did not have an urban centre, and a close examination of his list confirms this inference as correct. Examples include the *Gelani* (corresponding to Cicero's *Gelenses*), the *Selinuntii*, who continued to inhabit the territory of *Selinus* after the destruction of the city, and the *Naxii*, who must have lived in the territory of the downgraded city of *Naxos*.[57] Some of the communities which feature in Pliny, such as the *Symaethii* of eastern Sicily, may never have had a recognisably urban centre, and at least one community, that of the *Zanclaei*, has been identified as a Greek community living in the territory of *Messana* while remaining separate from the local citizen body of that city.[58]

While at least some of the self-governing communities listed by Pliny were demonstrably non-urban, we must also envisage the possibility that at least some agglomerations which technically were 'subordinate settlements' within the territories of self-governing cities might have displayed at least some 'urban' features.

As various scholars have pointed out, the third-to-fifth centuries CE witnessed the appearance of large rural agglomerations in various parts of Sicily. Of course, the best known example is *Philosophiana*. The excavations carried

56 For *Amestratus*, *Capitium* and *Helorus*, see Wilson 1990: 149 and 159; for *Apollonia*, see Bonanno and Perrotta 2008: 82; for *Abacaenum*, see La Torre 2009, Bacci et al. 2009. Wilson's estimate of 30 ha for *Abacaenum* is far too high.

57 Plin. *NH* 3.91.

58 Manganaro 1980: 461 n. 225. Ptolemy 3.4.13 lists *Dymethus* among the land-locked 'cities' of eastern Sicily.

out at this site have revealed the presence of a peristyle *domus* and a bath complex of the early first century CE. However, the evidence collected during recent survey campaigns leave no doubt that *Philosophiana/Sofiana* remained relatively small (< 10 ha) until the fourth century CE, when it expanded to 21 hectares.[59] Traces of other large rural settlements have been detected in other parts of the island, for instance at Vito Soldano, which has been credited with a built-up area of no less than 40 ha, in the hinterland of Mazara del Vallo, where the site of San Miceli reached 19.5 ha in the sixth century CE, and in the Monti Sicani, where the two sites of Chinesi and Cianciania occupied areas of 16.6 ha and 9.5 ha respectively. Chinesi appeared as a completely new settlement in the late first century BCE and grew into a large agglomeration in the first century CE. Cianciania already existed in Hellenistic times, but did not develop into a large *vicus* until the first century CE. The discovery of a bronze statue and of a mosaic floor suggest the presence of at least some well furnished dwellings.[60]

It seems reasonable to suppose that secondary settlements of this size performed certain central-place functions, for instance as market-places for the inhabitants of the surrounding districts.[61] However, since it seems to be generally agreed that most of the large *vici*, or ‘agro-towns’, of Roman Sicily peaked between the early-fourth and mid-sixth centuries CE, there is no need to discuss them extensively in a discussion which aims to trace developments before CE 200.

The only ‘secondary agglomeration’ of early-imperial Sicily which certainly deserves to be called a ‘town’ from an archaeological point of view is the harbour settlement of *Mazara*. Administratively, *Mazara* was a subordinate settlement in the territory of *Lilybaeum*, but archaeological research has revealed traces of port facilities at the mouth of the canal harbour, column shafts and capitals of marble and remains of a fourth-century house which had at least four mosaic floors. In addition, many inscriptions have been recovered. If the Roman settlement occupied approximately the same area as the walled town of the eleventh century, it would have measured c. 22 hectares.[62] Based on the

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59 See, for instance, Vaccaro 2012.

60 Vito Soldano: Giaccone 2012; San Miceli: Mosca 2015; Chinesi and Cianciania: Klug 2017; ead. 2018: 79; Bergemann 2018: 38. Cf. Bonacini 2016: 45 for traces of a Roman bath complex at Caltagirone, and Burgio 2012 on the late-Roman settlement of Cignana (near Palma di Montechiaro), which occupied more than 10 ha.

61 Cf. Bintliff 2018: 412–413.

62 Wilson 1990: 157–159; Giglio 1998, Mosca 2014 and 2015. Wilson 1985: 336 suggests that the Roman settlement at present-day Sampieri (near Scicli) might have been another town-like settlement, but the evidence from this site is too meagre to warrant any firm

evidence currently available we cannot exclude the possibility that *Mazara* peaked in the fourth century CE, but even if this was the case, it must already have been substantial by the mid-second century CE.

4 Urban Decline, Continuity and Expansion between 300 BCE and 200 CE

During the twentieth and early twenty-first centuries widely diverging assessments of the vitality of urban life in Roman Sicily have been defended. The main reason for this is that modern scholarship has been, and remains, deeply divided over the economic, demographic, social and cultural impact of the imposition of Roman rule on Sicily.[63] Important issues in this debate include the supposedly negative effects of Roman taxation, the relative importance of absentee landownership, the extent to which local elites benefited from new commercial opportunities, and the importance of rural slavery. I am keenly aware that the long-term evolution of the urban system of Sicily cannot be understood without taking into account changes in the political, administrative, economic and social contexts in which the urban and rural populations of the island operated. At the same time I feel that at least some publications do not sufficiently distinguish between the short-term impact of Roman rule and its long-term effects, or between the trajectories of particular cities and the long-term evolution of the urban system of Sicily as a whole.

One way of studying the fate of the cities of the island in the Hellenistic and early-imperial periods is to look at archaeological evidence of public or private building activities or at epigraphic evidence illuminating the intensity of civic life. This is the approach used by Jonathan Prag in a recent article on 'cities and civic life in late-Hellenistic Roman Sicily'. From his collection it appears that stone theatres were built at *Hippana* in the late fourth century and in *Iaetas* in the third century. In the course of the third century BCE other Sicilian cities, such as *Murgantia*, *Megara* and *Camarina*, developed or consolidated grand urban spaces on a monumental scale. In the light of this evidence it seems justified to speak of a widespread 'process of monumentalisation' which took off during this period.[64]

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conclusion on the size or chronology of this secondary agglomeration. Cf. Militello 2008: 191–192 and 205–207.

63 For a good survey of this debate see Prag 2009. For an optimistic assessment of late-Republican Sicily, see Wilson 2000a.

64 Prag 2014.

As pointed out by Prag, this wave of public building seems to have continued well into the second century BCE, particularly in the cities of northern and eastern Sicily, with multi-storey *skenai* being added to various existing theatres and winged *stoai* being erected in *Segesta* and *Soluntum*. For the first century BCE the archaeological record is much more meagre, but an early-first-century inscription from *Halaesa* refers to the existence of a basilica. In addition, some twenty inscriptions containing civic decrees of the third to first centuries BCE have been found in various Sicilian cities, and many more decrees are referred to in Cicero's Verrine orations.[65]

It is impossible not to agree with Prag's conclusion that the combined archaeological and epigraphic evidence supports a picture of continued vitality in a significant number of Sicilian cities in the third and second centuries BCE. At the same time we should be careful to distinguish between successive periods and remain alert to the possibility that developments in different Sicilian cities may have followed completely diverging trajectories. As Prag admits, some of the archaeological evidence of public building activities belongs to the late fourth or early-third century BCE. This evidence cannot be used to assess the fate of the cities in question during or after the First Punic War. Similarly, the indisputable fact that many Sicilian cities continued to issue civic decrees well into the first century BCE does not prove that civic life throughout the island remained as vibrant as it had been in late Classical or early Hellenistic times.

In my view the only way to obtain a clear view of the long-term impact of Roman rule on the cities of Sicily is by looking at continuities or discontinuities at the level of the urban system as a whole and during a period spanning four or five centuries. In accordance with this methodological premise I proceed to trace the evolution of Sicily's urban system by comparing the system which existed at the start of the Hellenistic period with that which had emerged by the end of the second century CE.[66] In other words, we will be looking at changes in the urban system which took place in a period of no less than five centuries.

65 Prag 2014: 176.

66 More than 25 years after publication Wilson 1990: 143–188, remains the best survey of the urban system of Roman Sicily. The brief discussion by Andrew Wilson (Wilson 2011: 183), inexplicably conflates the Classical and early-imperial periods, resulting in wildly inflated estimates not only for Syracuse and *Agrigentum*, but also for *Gela*, which was abandoned in Roman times. While avoiding some of Wilson's mistakes, Hanson 2016: 748–762, uses Classical size estimates for Syracuse and *Agrigentum* and various other Sicilian cities, supplementing these with estimates derived from maps representing city walls, built-up areas or street grids of early-imperial date. Unfortunately, most of these estimates have not been checked against the archaeological literature of the past twenty-five years. Hanson's cat-

Unlike my survey of the urban system of early-Hellenistic Sicily, my discussion of the cities of Roman Sicily will focus mainly on those Sicilian settlements which are known to have been administrative centres of self-governing communities at any time between 100 BCE and 200 CE. As has been explained in the previous section, my justification for adopting this approach is that, with the exception of *Mazara*, none of the secondary settlements which existed on the island at the end of the second century CE appears to have been recognisably urban.[67]

The inevitable starting point of our survey of the self-governing cities of Sicily is Syracuse. As we have explained, this city might have occupied some 325 hectares at the start of the Second Punic War. In 215 BCE Syracuse went over to the Carthaginian side, after which it was captured by the Roman general Marcellus in 212 BCE. This event had a big impact on the city. Cicero reports that Marcellus forbade any Syracusans from residing in *Ortygia*, because this part of the city could easily be defended. This prohibition was still in force at the time of the Verrine orations.[68] Interestingly, Strabo reports that when Augustus sent a colony to Syracuse in 21 BCE 'only the part that was adjacent to the island of *Ortygia* which had a sufficient circuit to make a notable city' was restored. It looks therefore that even in the early Augustan period *Ortygia* was not used for habitation, except perhaps by Roman administrators.[69]

From the early sixth century BCE *Ortygia* had been home to a large temple of Apollo, and in the first half of the fifth century a temple of Athena was erected in this part of the city. Between 200 BCE and 300 CE both these temples seem to have been kept in good repair. We also happen to know that Roman baths were erected on *Ortygia*.[70] These archaeological clues are compatible with Strabo's report if *Ortygia* remained in use as a public and sacred area.

In the mainland part of the city the area north of the great *decumanus* running east and west from the modern Piazza della Vittoria appears to have been abandoned. On this basis Wilson has suggested that Syracuse shrank to about 280 ha during the first centuries of Roman rule, but his map of the Roman city shows an area of only 245 ha, if the entire *Ortygia* quarter is included.[71] If two

alogue of monumental buildings is generally useful, but contains several buildings for whose existence there is no reliable evidence, such as an amphitheatre at *Netum* (cf. Orsi 1897: 70–71).

67 For the criteria on which this assessment is based, see footnote 54.

68 Cic. 2 *Verr*. 5.84.

69 Strabo 6.2.4.

70 Wilson 1990: 162.

71 Wilson 1990: Fig. 134.1, confirmed by the thorough discussion in Piazza 2009.

thirds of *Ortygia* (55 ha out of 80 ha)[72] had been occupied by domestic quarters in Classical and early-Hellenistic times, and if little habitation (e.g. 10 ha) remained on *Ortygia*, the aggregate area occupied by public buildings or residential quarters would have shrunk to approximately 200 ha. It is difficult to avoid the conclusion that Roman Syracuse had fewer inhabitants than the city of the late third century BCE.[73] Yet early-imperial Syracuse remained by far the largest city of Roman Sicily.

Akragas, now renamed *Agrigentum*, experienced a more drastic contraction of its built-up area. In his 1990 monograph Wilson suggested an estimate of between 80 ha and 100 ha for the area occupied by the Roman city, but this was little more than a guess.[74] Thanks to a series of survey campaigns directed by Oscar Belvedere and Aurelio Burgio, we now are in a much better position to assess *Agrigentum*'s development. From their excellent discussion it appears that Wilson's guesstimate was in the right ball park and that the Roman city occupied an area of c. 100 ha.[75] This means that the built-up area of Roman *Agrigentum* was between 2.5 and 3 times smaller than that of late-Classical and early-Hellenistic *Akragas*.

As has already been noted, some of the large cities of Classical Sicily were destroyed in the fifth to third centuries BCE, and some of these cities never recovered. While the appearance of the *Gelani* on Pliny's list is a sure sign that the territory of *Gela* continued to be inhabited, it does not imply the recovery of the city.[76] Similarly, the main settlement of the *Selinuntii* who feature among Pliny's Sicilian communities appears to have been the small settlement of *Thermae Selinuntinae* (Sciacca) rather than the old city of *Selinus*.[77] Pliny also refers

72 Recent estimates for *Ortygia* vary from 40 ha to 50 ha. See, for instance, Cerchiai, Janelli and Longo 2002: 205: 40 ha; Drögemüller 1969: 53, and Evans 2009: 9: 50 ha. Nowadays *Ortygia* occupies an area of c. 55 ha, but it was much larger in Antiquity. On Wilson's map it occupies an area of about 80 ha.

73 Cf. Basile 2012: 216: 'Dalla conquista romana in poi, la città, pur vivendo ancora momenti di prosperità, di fatto contrae il suo abitato, non raggiungendo mai più l'estensione precedente'. In view of the clear evidence of urban shrinkage, it is difficult to understand why Andrew Wilson (Wilson 2011: 183) credits Roman Syracuse with no fewer than 90,000 inhabitants.

74 Wilson 1990: 170.

75 Belvedere and Burgio 2012: 61, Fig. 41. Cf. Bordonaro 2012: 137: 'In età romana Agrigento subisce una notavole contrazione'.

76 In principle, Pliny's *Gelani* might be identified as the inhabitants of *Phintias* and its territory, but this interpretation sits uneasily with the fact that the *Phintienses* also feature on Pliny's list.

77 Andrew Wilson (Wilson 2011: 183) is clearly wrong in classifying *Selinus* as one of the 'major cities' of Roman Sicily.

to the community of the *Naxii*, whose city had been destroyed at the end of the fifth century BCE. As we have seen, a small part of the classical city continued to be inhabited in Hellenistic times. In the early-imperial period, however, a new settlement appeared along the road between Catania and *Messana*. In all likelihood this became the new central place of the *Naxii*.[78]

Some coastal cities which had survived the wars of the fifth-to-third centuries more or less intact, or had recovered from total or partial destruction, appear to have gone into decline at various moments between the late second and late first centuries BCE. Archaeological research carried out around the *agora* of *Camarina* suggests that the large houses which were discovered in this area were not modified or repaired after the first century BCE. This finding is in line with the chronology of the coins discovered in the *agora*, which points to a notable downturn in commercial activity in the first half of the first century BCE. Although significant amounts of ceramic evidence belonging to the late first century BCE or the first decades of the first century CE have been identified at Camarina, the archaeological record as a whole confirms Wilson's judgment that the city was in its death-throes in the Augustan period.[79]

Two other cities on the south coast of Sicily which seem to have declined in the first century BCE are *Phintias* (Licata) and *Heraclea Minoa*. During its heyday in the third century BCE *Phintias* might have occupied an area of approximately 30 ha, but recent excavations carried out on the southern slopes of the Monte Sant'Angelo have revealed the remains of Hellenistic houses which were abandoned in the second half of the first century BCE. As pointed out by La Torre, nothing is known about the development of the public areas of the city or about those residential quarters which must have been situated at the foot of the hill and in the vicinity of the harbour.[80] Nonetheless the abandonment of the residential quarter of Monte Sant'Angelo prompted him to suggest that *Phintias* experienced a severe contraction immediately before and during the Augustan period. It seems significant that Strabo does not refer to *Phintias* in his survey of Roman Sicily.

Some 60 km to the west of *Phintias* the coastal city of *Heraclea Minoa* seems to have gone into decline from the late second century BCE onward. As noted above, the size of the walled area of *Heraclea* had already been reduced to 30 or 35 ha in the fourth century BCE. The city's theatre was destroyed in the third century BCE and never rebuilt. After the period of the First Servile War, small

78 Lentini 2001: 23–31.

79 Wilson 1990: 37. Note that the *oppidum Camarina* features on Pliny's list of Sicilian cities and communities (*NH* 3.89).

80 La Torre 2008: 8. Cf. Amato 2012: 312.

houses and workshops were built on the ruins of the theatre, but large parts of the residential areas of the fourth and early third centuries remained unoccupied.[81] Habitation seems to have ceased altogether between 50 BCE and 20 BCE, and this helps to explain why *Heraclea* does not appear on Pliny's list of Sicilian cities and communities.[82]

On the northern coast of the island, the small city of *Soluntum* seems to have been doing reasonably well until the mid or late first century BCE. However, already in the first century CE private houses were built in the theatre, and various other public amenities fell into disrepair from the Augustan period.[83] Although a dedication to Caracalla has been found at *Soluntum*, the site of the Hellenistic and early-imperial city seems to have been abandoned by the mid-third century CE. However, because the city appears not only in the Antonine Itinerary but also in a law of the mid-fifth century CE, it has been suggested that the area of habitation moved back to the area occupied by Classical *Solus*, which was situated directly on the coast.[84] If this theory is correct, the new settlement is likely to have been a modest port of call rather than a fully fledged town equipped with a significant number of public buildings.

There is at least one other example of a city in the coastal districts of Sicily moving to the coast. In late-Classical and Hellenistic times the small city of *Calacte* (*Kale Akte*) had been a hill-top settlement on the site of the modern town of Caronia. In this period the city occupied an area of approximately 8 ha. In the mid-first century CE the town on the hill of Caronia was abandoned, but a new settlement appeared at the site of present-day Marina di Caronia. Based on the limited amount of evidence currently available an estimate of c. 10 ha may be offered for this new agglomeration, which may not have been urban in character.[85] The continued existence of the *Calactini* as a self-governing community is confirmed by Pliny's list, on which they appear as the *Galatini* (Plin. *NH* 3.91).

A shift in settlement similar to that which has been observed in *Calacte* has been suspected in the case of *Haluntium*. Between the fourth century BCE and the Augustan period this city was perched on a mountain overlooking the Tyrrhenian Sea, at a distance of c. 10 km from the coast. In the first century CE

81 de Miro 1958: 257–260; id. 1966: 221–225.

82 There is no evidence to support Andrew Wilson's view that *Heraclea* remained a 'major city' in early-imperial times (Wilson 2011: 183) or Hanson's claim (Hanson 2016: 754) that occupation continued throughout the Roman period.

83 Tusa 1968; Wolf 2012. Cf. Wilson 1990: 23–24 and 156; id. 1995–1996: 102.

84 Dedication to Caracalla: *CIL* X, 7336. Fifth-century law: *Nov. Val.* 1.2.1, 440 CE; cf. Wilson 1990: 156.

85 Collura 2012.

a number of houses which had been built in the third century BCE were abandoned, suggesting that the city went into decline in the early-imperial period.[86] It seems possible, however, that the population of the city moved to a new location in the coastal plain, although as yet no evidence of a new settlement has been discovered.

The northern port city of *Cephaloedium* (Cefalù) is referred to as a 'small town' (*polichnion*) by Strabo. This label seems entirely appropriate for an urban centre whose size has been estimated as only 10.5 ha. Unfortunately, relatively little archaeological work has been done in the city centre of modern Cefalù, making it difficult to trace the town's development during the first centuries of the Empire. Various streets were repaved in the Augustan period, but as yet no traces of other Roman interventions regarding public amenities have been detected. Most of the burials are Hellenistic but the cemeteries remained in use at least until the first century CE. A handful of early-imperial inscriptions are on display in the local archaeological museum, and two sarcophagi and part of a third one, all belonging to the mid-third century CE, can be seen in the cathedral and in the church of San Francesco.[87] We cannot venture beyond the conclusion that the Roman city continued to exist until the early sixth century CE.

While there is clear evidence of contraction or abandonment in at least six coastal cities (Syracuse, *Helorus*, *Agrigentum*, *Camarina*, *Phintias* and *Heraclea*), various other maritime cities appear to have flourished during the first two centuries of the imperial period. On the west coast of the island, the built-up districts of *Lilybaeum* (Marsala) filled the entire area enclosed by the Punic city wall (90 ha). Some 80 km to the north-east Roman-period *Panormus* (Palermo) also seems to have occupied all of the 36 ha within the Punic fortifications.

Clear signs of prosperity have also been detected in *Tauromenium*, *Tyndaris* and *Halaesa*. The classical walls of *Tauromenium* are thought to have enclosed an area of approximately 65 ha, but only about one third of this area (20 ha) appears to have been occupied during the Principate.[88] In the case of *Tyndaris* as well only about one third of the area enclosed by the wall of the fifth century CE (10 ha out of 27 ha) appears to have been covered by Hellenistic and Roman buildings.[89]

86 Bonanno 1993–1994, Bonanno and Arfica 2008–2009; Lentini 2006.

87 Wilson 1990: 157; di Vincenzo 2013: 115.

88 Area enclosed by Classical walls: Hansen 2006: 106–107; size of area available for occupation 28 ha according to Rizzo 1928: 301; 29 ha according to Wilson 1990: 382 n. 78.

89 Belvedere and Termine 2005: 86, Figs. 1–2.

Like *Cephaloedium*, *Halaesa* appears in Strabo as a 'small town' (*polichnion*) and from this it has been inferred that this city might have become less important during the imperial period. However, since *Halaesa* occupied an area of only 16 ha, the use of the term *polichnion* can be accounted for without positing a period of significant decline. After the second century CE *Halaesa* does not seem to have received any new monumental buildings, but everything suggests that the city continued to be well-populated until Late Antiquity.[90]

Only three coastal cities are thought to have expanded far beyond their Classical walls. As we have seen, the early-fourth-century walls of *Messana* might have enclosed an area of approximately 25 ha. Not much is known about the layout of the Roman city, but we do happen to know the approximate whereabouts of its southern and northern boundaries (cf. Appendix). If Roman *Messana* did not extend westward beyond the Colle della Caperrina, as seems likely, it would have occupied approximately the same area as that enclosed by the Norman city walls (60 ha).[91] On this admittedly somewhat unsatisfactory basis, a doubling of the built-up area may be hypothesised.

Another coastal city which is believed to have acquired a built-up area extending far beyond the pre-Roman walls is *Catina* (Catania). Estimates for the area enclosed by the walls of Classical *Katane* range from 34 ha to 65 ha (cf. above). Whichever estimate is preferred, there can be no doubt that Roman *Catina* was much larger than its Archaic or Classical predecessor. In various publications Wilson has credited the Roman city with a built-up area of between 110 ha and 130 ha.[92] Based on a recent re-examination of the archaeological evidence by Santo Privitera an estimate of approximately 90 ha seems more realistic.[93] However, even if we opt for this lower estimate, the Roman city would have been about two times larger than its Archaic and Classical predecessors, on the assumption that the high estimate for Archaic-Classical *Katane* is correct and that 70 % of this area (45 ha) was built over.

Some forty km east of *Panormus* the port city of *Thermae Himeraeaea* (Termini Imerese), which had replaced the Classical city of *Himera* (cf. above), also

90 Wilson 1990: 150. Burgio 2008a: 45 accepts that *Halaesa* might have declined from the late second century CE, but also sees signs of vitality during the first two centuries of the Principate.

91 Scibona 1986: 455 and the maps in Bacci and Tigano 1998–2003, one of which is reproduced in Fuduli 2012: 207, Fig. 14. The area of c. 100 ha shown in Wilson 1990: Fig. 134.3 looks too large.

92 Wilson 1990: 171 (128 ha); id. 1996: 152 (130 ha); cf. Privitera 2009: 58.

93 Privitera 2009: 48–49. The archaeological evidence shows that the expansion of the city beyond the Archaic and Classical walls started as early as the mid-third century BCE (ibid. 44).

flourished. To judge from the locations of the Hellenistic cemeteries, the area enclosed by the city wall of the fourth century BCE might have been no larger than 15 ha. In early-imperial times the built-up area expanded on to the hill of Santa Lucia, and another new urban quarter grew up near the Roman harbour. The area occupied by the Roman city might have been roughly equal to that enclosed by the medieval walls (50 ha).[94] If these indications can be relied upon, Roman *Thermae Himeraeae* was approximately three times larger than its late-Classical and Hellenistic predecessors.

While a considerable number of coastal cities appear to have prospered in early-imperial times, archaeological investigations carried out during the past fifty years have revealed many cases of urban decline or abandonment in the interior districts of Sicily. As we shall see, a few land-locked cities seem to have survived in pretty good shape until the end of our five-hundred-year period, and it is also clear that those cities where evidence of shrinkage or abandonment has been detected did not decline all in one particular period. Yet there can be no doubt that by the end of the second century CE a large proportion of those cities of the interior districts which had existed in the early-Hellenistic period had ceased to be recognisably urban, not only in terms of settlement size, but also because elite expenditure on public amenities and private urban dwellings had come to a halt.

By far the most striking example of urban decline in the land-locked parts of eastern Sicily comes from *Leontini*.[95] According to the *Copenhagen Inventory of Archaic and Classical Poleis*, the sixth-century wall of *Leontini* enclosed an area of approximately 40 ha, but the new walls of the fifth and fourth centuries are thought to have protected a considerably larger area, with estimates for the size of the city at the moment of maximum expansion ranging between 60 ha and 70 ha (cf. above).[96]

In 214 BCE *Leontini* was captured by the Romans but not destroyed (Livy 24.30). It appears from the Verrine orations that part of the city's territory was confiscated during the Second Punic War, but, as Jonathan Prag has recently argued, the land in question might well have belonged to King Hiero II of Syracuse.[97] In short, there is no evidence to suggest that the city was severely punished in or after 214 BCE. Yet the archaeological record leaves no doubt that the second and first centuries BCE witnessed a gradual shift in settlement from the

94 Belvedere 1997; Chiovaro and Rondinella 2017.

95 For the purpose of this contribution 'eastern Sicily' has been defined as comprising all locations to the east of the fourteenth meridian.

96 Felici and Buscemi Felici 2004: 42 (70 ha); cf. Frasca 2009: 68, and id. 2012: 176 (60 ha).

97 Prag 2014: 194–195.

hill occupied by Classical and Hellenistic *Leontini* to the valleys below, leaving only a small settlement at the site of the old city.[98]

Some inland cities of eastern Sicily appear to have been abandoned in the course of the third century BCE. One example is *Hybla Heraea*, if the traditional identification with Ragusa Ibla is correct.[99] Despite the disappearance of their central city, the *Hyblenses* feature on Pliny the Elder's list of Sicilian cities and communities (*NH* 3.91).

The eastern-Sicilian settlement of *Noae* has not convincingly been located on the ground. Candidates include Montagna di Ramacca, Monte Iudica, Monte Catalfaro and Monte Balchino. The hilltop settlement of Monte Balchino was abandoned around 450 BCE, Montagna di Ramacca and Monte Iudica after the fourth century BCE, and Monte Catalfaro after the third century BCE.[100] Yet the *Noini* appear on Pliny's list (*NH* 3.91), suggesting that they survived as a self-governing community.

In addition, at least eleven further fortified hill-tops settlements of eastern Sicily are thought to have been abandoned in the course of the third or second centuries BCE: Castiglione di Ragusa, Cozzo Mususino, Monte Artesina di Nicosia, Monte Desusino, Monte Gibil Gabib, Monte Rossomanno, Monte San Giorgio (perhaps to be identified with ancient *Ameselon*), Piano Rizzuto, Polizzi Generosa, Sabucina and Terravecchia di Grammichele.[101]

Various other small cities of the interior districts of eastern Sicily went into decline at a later date. *Herbessus* (Montagna di Marzo) was abandoned in the first century BCE, *Apollonia* either in the late first century BCE or in the early first century CE, *Murgantia* in the mid-first century CE, and *Assorus* in the final decades of the first century CE. According to Wilson, *Mutyce* (Modica) carried on as a small town until the early third century CE, but there is hardly any evidence of continued occupation in early-imperial times, and the appearance of a large necropolis at the village of Treppiedi suggests that the population may have scattered into the rural territory.[102]

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98 Valenti 1999; Frasca 2009: 147–159.

99 Militello 1958; Wilson 1990: 152. In principle, Pliny's *Hyblenses* might be the inhabitants of *Hybla Gereatis* (Paternò), but Paus. 5.23.6 reports that this *Hybla* was a village in the territory of *Catina*.

100 Montagna di Ramacca: Procelli 1975; Monte Iudica: Orsi 1907: 489–491, Wilson 1985: 335, Privitera 1988–1989 and 1997–1998; Monte Catalfaro: Messina 1970, Cirelli 1997–1998, Maniscalco 2005, Bonacini 2007: 50; Monte Balchino: Albanese 2003: 146, Bonacini 2007: 56; in the second half of the second century BCE a small village appeared on Poggio Spadalucente, about 1 km to the south of Monte Balchino.

101 Cf. Wilson 2000b.

102 Montagna di Marzo: Guzzardi 1999; *Apollonia*: Bonanno and Perrotta 2008; *Assorus*: Morel 1966, Wilson 1990: 45; *Mutyce*: Wilson 1985: 320, di Stefano 2009.

On the south-western slope of Etna the city of *Hadranum* (Adrano) continued to be inhabited, but almost certainly declined. To judge by the size of the area enclosed by the wall circuit of the fourth century BCE (60 ha), *Hadranum* had been a city of considerable importance in the late Classical and Hellenistic periods. Only a limited number of houses have been excavated, most of them during rescue excavations. Based on the evidence currently available it looks as if habitation of these domestic units ceased after the third century BCE, and published funerary material has been dated to the fourth-to-second centuries BCE.[103] Yet *Hadranum* is known to have been a *municipium* in the second century CE. It seems reasonable to infer from this that the city continued to be inhabited but on a much reduced level.[104]

In northern and north-eastern Sicily the hill-top towns of *Amestratus*, *Abacaenum* and *Apollonia* are thought to have been downgraded to secondary settlements within the territories of neighbouring cities (cf. above). While the *Herbessenses*, the *Murgentini*, the *Assorini* and the *Hadranitani* appear on Pliny's list, the *Abacaenini*, the *Amestratini* and the *Apolloniates* do not.

The only city of the interior districts of eastern Sicily that has produced solid evidence of continued prosperity and investment in monuments and public buildings during the first and second centuries CE is *Centuripae*. In his second Verrine oration Cicero credits the city, or rather the community, with no fewer than 10,000 *cives*, suggesting a population of approximately 35,000 for the city and its territory. It also appears that wealthy citizens from *Centuripae* leased a large proportion of that part of the *ager Leontinus* which had become *ager publicus* after the Second Punic War.[105]

Most of the remains of Hellenistic and Roman *Centuripae* lie buried beneath the modern town of Centuripe, which occupies the upper slopes of a star-shaped hill. Excavations carried on the north-eastern slope of the central hill have revealed the remains of a *forum* complex which was littered with statues of Augustus and other emperors of the first and early-second centuries CE. Large parts of this *forum* complex and some of the buildings surrounding it have been dated to the second century CE. In other parts of the city remains of two Roman baths have been detected, and in the late second or early third century CE a third bath building was erected on the outskirts of the urban area. Yet there is some archaeological evidence to suggest that some peripheral quarters which had grown up in Hellenistic times were not reoccupied when the

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103 Lamagna 1991 and 1997–1998.

104 Cf. Wilson 1988: 197, and id. 1990: 151.

105 Cic. 2 *Verr*. 2.163: *decem milia civium*; cf. Duncan-Jones 1982: 261. Part of the *ager Leontinus* farmed by tenants from *Centuripae*: Cic. 2 *Verr*. 3.114.

city was rebuilt by Augustus,[106] and there are no reasons to think that early-imperial Centuripae was larger than its modern successor which occupied an area of approximately 18 ha in the late 1980s.[107]

I round off my discussion of the transformation of Sicily's urban system between the early third century CE and the final decades of the second century CE with a brief discussion of the archaeological evidence relating to the land-locked cities of the western half of the island. As we shall see, here too the general picture is one of urban decline or abandonment, but as in the case of eastern Sicily these processes affected different cities in different periods.

In the region between the Belice (*Hypsas*), the Eleuterio (*Eleutherus*) and the Salso (*Himera*), the cities of *Hippana*, *Triocala*, *Myttistratum* and *Macella* were partly destroyed or completely wiped out in the third century BCE, probably during the First Punic War. In *Hippana* and *Triocala* destruction was followed by complete abandonment. Archaeological work carried out on the sites of *Myttistratum* and *Macella* has produced evidence of continued occupation, but this was on a small scale and no longer urban.[108] The *Hippanenes* are not mentioned by Pliny (unless they lurk behind the otherwise unknown *Ichanenses*), but the *Magellini* (= *Macellini*), the *Mutustratini* and the *Triocalini* feature on his list and must have survived as self-governing communities.

In addition, at least fourteen further fortified hill-top settlements in the area between the Belice and the Salso have produced evidence of abandonment in the third century BCE, contributing to the impression that this period witnessed a drastic restructuring of the settlement system of this part of Sicily.[109]

Other fortified agglomerations were also abandoned but at much later dates. The settlement at Monte Riparato di Caltavuturo, which might correspond to *Paropus*, the central town of Pliny's *Paropini*, ceased to be inhabited in the final decades of the first century BCE.[110] In the area to the south of *Panormus* the settlement of Pizzo Nicolosi also survived until the first century BCE albeit in

106 On the north-eastern limit of the area occupied by Hellenistic *Centuripae*, see Patané 2006: 209–210, modifying Wilson 1988: 187.

107 Wilson 1990: 147, Fig. 129.7. Nowadays the hill-top town occupies an area of about 20 ha.

108 *Hippana*: Vassallo 1997; *Triocala*: Panvini 1988–1989; *Myttistratum*: Fiorentini 1980–1981 and 1984–1985, Wilson 1990: 145; *Macella*: Spatafora 1994–1994 and 2009. Cf. Plb. 1.24.10–11 and Diod. 23.9.3.

109 The hill-top settlements in question are Balate di Marianopoli, Castellazzo di Palma di Montechiaro, Cozzo Sannita, Cozzo Spolentino, Montagna Vecchia di Corleone, Montagnoli, Monte Falcone di Baucina, Monte Adranone, Monte Porcara, Monte Raffe di Mussomeli, Mura Pregne, Pizzo di Casa, Pizzo di Ciminna, Pizzo Nicolosi, Rocca Nadore. See Wilson 2000b, Gargini 2001 and Vassallo 2011. For Pizzo di Casa see Vassallo 1985: 140.

110 Wilson 1990: 145; Pancucci 2006.

much reduced form.[111] Another good example is provided by the Elymian town of *Entella*. This town seems to have peaked in the fourth and early-third centuries, when about two thirds of its walled area were occupied with varying degrees of intensity (cf. above). After a period of contraction which lasted from the first century BCE to the early Augustan period only the southern part of the Rocca continued to be inhabited. By the mid first century CE the city was completely abandoned.[112]

In the region to the west of the Belice and the Eleuterio signs of abandonment during the third century BCE have been detected at Castellaccio di Sagana, Castello di Calatubo, Monte d'Oro di Montelepre, Monte Polizzo and Pizzo Cannita.

Other urban centres in this part of Sicily survived much longer. In Classical and early-Hellenistic times *Segesta*, whose fifth-century walls enclosed an area of 55 ha, had been the largest city of the *Elymi*. Sometime after the Roman conquest a new wall section was built in an area formerly occupied by Hellenistic houses. After the construction of this new wall, which has been variously dated to the second or first centuries BCE, the wall circuit of *Segesta* enclosed an area of 32 ha. In the late first century BCE or early first century CE the city was equipped with a small *forum*. While the creation of this new public space attests to the continued vitality of the city until the Augustan period, signs of urban decay begin to appear in the first century CE, when the theatre ceased to be kept in good repair and some of the city's Hellenistic houses were abandoned. By the mid-third century CE the area occupied by the Hellenistic and late-Republican city was completely abandoned, with *Aquae Segestanae* emerging as the new central place of the *Segestani*.[113]

Some 20 km to the south-west of *Panormus* the hill-top town of *Iaetas* (Monte Iato) had a walled area of approximately 40 hectares (cf. above). Extensive archaeological investigations which have been carried out since the early 1970s have shown that *Iaetas* flourished in the fourth and third centuries BCE. In this period *Iaetas* had a theatre, a *bouleuterion* and a paved *agora* that was enclosed by three stoas and two temples. As late as the final decades of the second century BCE a new council house was erected. From the late first century BCE public building activities came to a complete halt and the town started to go into decline. From the first century CE onward simple dwellings appeared in the *agora* and near the dilapidated theatre. This proves that *Iaetas* escaped total abandonment, but after the cessation of public buildings and the disap-

111 Vassallo 1985: 141.

112 Nenci 1996; Michelini and Parra 2001.

113 Wilson 1990: 383 n. 78; id. 1995–1996: 116–117; Facella and Olivito 2010.

pearance of elite dwellings it clearly declined to the level of an overwhelmingly agrarian settlement to which the label 'urban' can no longer realistically be applied.[114]

Two further towns which were situated to the west of the Platani and the Eleuterio are also known to have declined during the late Republic or Early Empire. To judge from the material unearthed by the recent excavations at Salemi, the site of ancient *Halicyae*, occupation of the town became very sporadic after the first century BCE.[115] This might explain why *Halicyae* does not appear in the Antonine Itinerary of the late third century CE. In the northwestern parts of the Elymian region the town of *Eryx* seems to have been abandoned in the first half of the first century CE. Since *Eryx* was home to the famous temple of *Venus Erycina*, one would expect to find at least some evidence of continued vitality. Yet Strabo reports that the town was sparsely inhabited, and not only the city wall but even the sanctuary seems to have fallen into disrepair after the early first century CE. Wilson suggests that *Eryx* became a *vicus* in the territory of *Segesta*.[116]

It is time to pull together some of the threads of the first part of this paper. Our survey of the coastal cities of Sicily has revealed six cases of urban decline, or eight if *Soluntum* and *Calacte* are included. Nine coastal cities appear to have flourished, and three of these experienced significant growth during our five-hundred-year period. In striking contrast to this no fewer than 47 (18 + 29) towns and hill-top settlements of the interior districts show signs of severe shrinkage or abandonment.[117]

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114 Isler 2000 offers a succinct survey of the town's development. See also Wilson 1990: 144, id. 1995–1996: 108, id. 2000a: 147–150, and Isler 2012: 234–235.

115 Vecchio et al. 2003; Kolb et al. 2007. After suggesting that Salemi/*Halicyae* might still have flourished in the first century BCE, Kolb 2007: 183, goes on to note the striking rarity of Arretine sherds, with only one certain example among 6,000 diagnostic sherds discovered during the excavations in Via Cappasanta.

116 Strabo 6.2.6; Tac. *Ann.* 4.43; Tusa and Nicoletti 2003; Wilson 1990: 154. In 260 BCE the Carthaginian general Hamilcar demolished *Eryx*, except for the area around the temple, and removed the Erycinians to *Drepanum*. Yet there is no evidence for *Drepanum* developing into an important city, either during the Republic or under the Empire.

117 Eastern Sicily: *Assorus*, Castiglione di Ragusa, Cozzo Mususino, Modica, Monte Artesina di Nicosia, Montagna di Marzo, Monte Catalfaro, Monte Desusino, Monte Gibil Gabib, Monte Rossomanno, Monte San Giorgio, *Murgantia*/Morgantina, Piano dei Casazzi, Piano Rizzuto, Polizzi Generosa, Ragusa Ibla, Sabucina, Terravecchia di Grammichele. Western Sicily: Monte Adranone, Balate di Marianopoli, Castellaccio di Sagana, Castellazzo di Palma di Montechiaro, Castello di Calatubo, Cozzo Sannita, Cozzo Spolentino, *Entella*, *Halicyae*, *Hippana*, *Iaetas*, *Macella*, Montagna Vecchia di Corleone, Montagnoli, Monte d'Oro di Montelepre, Monte Falcone di Baucina, Monte Polizzo, Monte Porcara, Monte Raffe di Mussomeli, Monte Riparato, Mura Pregne, Pizzo Cannita, *Myttistratum*, Pizzo di Casa, Pizzo di Ciminna, Pizzo Nicolosi, Rocca Nadore, *Segesta*, *Triocala*.

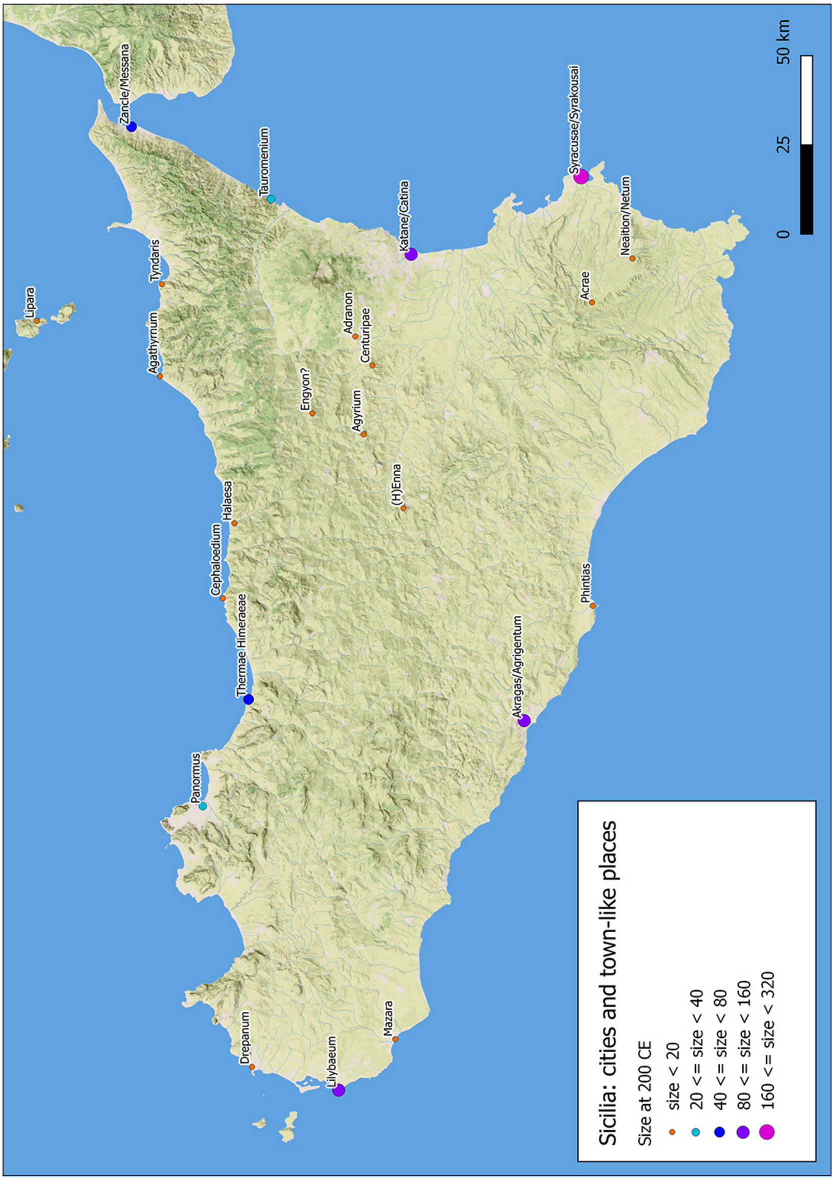

FIGURE 8.2 Towns and 'town-like' settlements in Roman-imperial Sicily, c. CE200

My map for the final years of my five-hundred-year period shows the new urban pattern resulting from these long-term regional trends (Fig. 8.2). Unlike the map which can be drawn for the start of the Hellenistic period (Fig. 8.1), that for 200 CE shows only a handful of urban centres in the interior districts of the island. None of these surviving inland towns occupied an area larger than 20 hectares (the largest being *Centuripae* with c. 18 ha) and all of them were situated in the eastern part of the island. As noted above, the number of coastal cities was also severely reduced during our five-hundred-year period, and at least some of those maritime cities which survived appear to have shrunk. How do we explain these striking reconfigurations?

From a *longue durée* perspective it is, of course, not surprising that at the end of our five-hundred-year period all of the largest cities of Sicily were situated on the coast. From the Archaic period onward the Greek and Punic colonies had controlled not only the coastal plains but also large tracts of land in the landlocked districts of the island.[118] As a general rule, the cities of the interior districts had smaller tracts of fertile land, not only because they were situated in mountainous areas but also simply because for historical reasons they had never been able to establish control over extensive areas.

The colonisation programme that was carried out under Augustus can be seen as reinforcing the coastal emphasis of Sicily's urban system. In 21 BCE Roman colonies were established in Syracuse, *Catina*, *Panormus*, *Thermae Himeraeae*, *Tauromenium* and *Tyndaris*, but none in the interior districts. Part of the explanation must be that the coastal plains contained extensive tracts of fertile land where large groups of veterans could be settled. In addition, the presence of communities of Roman citizens in these maritime cities is likely to have enhanced their attraction to new settlers (cf. below).[119]

At the same time an explanatory model which focuses on the geographical distribution of natural resources, on inherited patterns of administrative control over these resources and on the distribution of existing communities of Roman citizens cannot account for the abandonment or contraction of a very large number of small cities and town-like hill-top settlements in the inte-

118 See, for instance, Muggia 1997: 100–102 for a discussion of the enormous territory of Classical *Akragas*.

119 In Classical and Hellenistic times various landlocked cities of eastern Sicily, such as *Centuripae* and *Leontini*, also controlled large amounts of good arable land. In early-imperial times the territory of *Leontini* may have been divided between *Catina* and *Centuripae* (Wilson 1990: 151). Although *Centuripae* flourished during the Principate, there can be no doubt that *Catina* was several times larger.

rior districts of Sicily. Nor can it explain why only some of the coastal cities of Roman Sicily flourished whereas other maritime cities declined or disappeared.

In view of the high levels of violence which are known to have existed on the island it is tempting to posit the existence of a causal connection between quasi-continuous warfare and the disappearance or decline of cities. As the examples of *Gela* (destroyed between 287 BCE and 282 BCE) and *Megara Hyblaea* (destroyed in 214 BCE) show, some Sicilian cities were completely wiped out as result of warfare and population displacement. However, many other cities which were badly hit by the wars of the third century BCE, such as *Akragas*, *Lilybaeum*, Syracuse and initially also *Camarina*, are known to have recovered. Conversely, a considerable number of cities which were lightly hit, such as *Leontini*, or did not suffer any damage at all, such as *Phintias*, are known to have gone into decline at various moments between the early second century BCE and the late first century BCE.

The disappearance of some of the fortified hill-tops towns of the interior districts of western Sicily can be explained as reflecting the disappearance of the frontier which had separated the Carthaginian sphere of influence from the rest of the island.[120] Some of the small towns of Sicanian Sicily, such as *Hippana* and *Triocala*, had served as strongholds at strategic points in this frontier zone. Part of the reason why these two cities were never reoccupied after the First Punic War may well have been that the need for such strongholds disappeared after the unification of the island under Roman rule.

Perhaps more importantly, the gradual establishment of the *pax Romana* after the First and Second Punic Wars must have meant that the defensive considerations which had prompted a large proportion of the Sicilian population to build their houses in fortified hill-top settlements became largely irrelevant. As Wilson observes in his 1990 book, 'Life on a not-easily-accessible and often waterless mountain-top, however spectacular the view, was hardly comfortable or convenient once defensive factors no longer made hill-top dwelling imperative'.[121]

In addition, the Roman conquest resulted in a drastic redirection of resource flows on the island. Between the First and Second Punic Wars the inhabitants of western and central Sicily began to pay taxes (in kind) to the new provincial administration, and after the disappearance of the kingdom of Syracuse the *decuma* previously owed to the king of south-eastern Sicily also began to

120 After the treaty of 339 BCE the river *Lykos* (the present-day Platani) formed the eastern boundary of the Carthaginian *eparchia*. See De Vincenzo 2013: 24–28.

121 Wilson 1990: 155.

be farmed out by the provincial governor.[122] From now on these taxes had to be carried to port cities from where they were shipped to the city of Rome or to Roman armies operating in various parts of the Mediterranean world. In conjunction with the relative safety resulting from the disappearance of invading armies and internal warfare this re-orientation of the Sicilian tax system and economy must have increased the attractiveness of living near a major or secondary road in one of the valleys.

What is less clear is what happened to the local elites of these declining towns. Wilson argues that local landowners are unlikely to have moved to the large or medium-sized cities of the coastal districts, in part because it must have been difficult for them to be accepted into the elite of another city, but also because they must have been disinclined to move away from those areas where they owned most of their landed property.[123] On this basis he identifies the villa estates of the de-urbanised regions as the most likely destinations of the local aristocracy. It is, however, not immediately apparent why moving to an isolated rural estate without any public amenities would have been more attractive than building a new life in a vibrant coastal city.

In a recent article Claudia Moatti re-examines the legal rules governing the legal status of *incolae* (immigrants residing in a city whose citizenship rights they lacked). According to a passage from Gaius' commentary on the provincial edict which has been preserved in the Digest, it appears that by the mid-second century CE *incolae* had to perform public obligations (*munera*) not only in those cities where they lived but also in those communities from which they originated. This rule seems to have been generalised by Hadrian. For our purposes the most interesting aspect of this legal principle is that it presupposes a significant level of mobility among people sufficiently wealthy to qualify for the imposition of public duties. A fragment from Ulpian's *Opinions* explicitly states that it applied to *decuriones* who have moved away from their cities of origin and that the provincial governor is to force such migrants to return to their home cities and to take on any public duties to which they are liable.[124] Given

122 On Roman taxation in Republican Sicily see Scramuzza 1937: 253–259; Pinzone 1999; Dubouloz 2007. Prag 2003 points out that the tax-farmers who collected the grain tax were members of local elites rather than Roman citizens from mainland Italy. There is no evidence to support the theory that Sicily ceased to be taxed in kind during the Principate. See Duncan-Jones 1990: 189–190.

123 Wilson 1990: 156.

124 *D.* 50.1.29 Gai. and *D.* 50.2.1 pr. Ulp., to be read with Moatti 2014: 136–140, and ead. 2017: 242–244. For further discussion see Gagliardi 2006: 451–480. Interestingly, various cities of early-imperial Italy are known to have co-opted immigrants belonging to various status groups as *cives adlecti* (Garnsey and de Ligt 2016). It does not seem far-fetched to suppose

this clear evidence for elite mobility, we must surely reckon with the possibility that many members of the old elites of the decaying towns of the interior districts of Sicily did in fact decide to spend part of their lives in other cities.

Let us now take a closer look at the development of cities in the coastal districts. As we have seen, a considerable number of coastal cities which had been important in the Classical or Hellenistic periods appear to have gone into decline sometime between 300 BCE and CE 200. Along the south coast *Camarina* and *Heraclea Minoa* were abandoned, and signs of contraction have been discovered at *Phintias* and *Agrigentum*. On the north coast the hill-top towns of *Soluntum* and *Calacte* were abandoned in favour of modest ports of call. Yet various other coastal cities, such as *Lilybaeum*, *Panormus*, *Catina* and *Messana*, flourished. On the east coast Syracuse seems to have lost some of its residential quarters, but maintained its position as the largest city of the island. How do we explain these patterns?

Port cities were the most likely beneficiaries of the reconfiguration of resource flows which resulted from the Roman conquest. As we have just noted, following the imposition of Roman rule taxes in kind were carried to port cities and shipped out of the island. At the same time the fast expansion of the city of Rome created a new market for Sicilian exports. Writing in the time of Augustus, Strabo refers to Sicily as 'the storehouse of Rome'.[125] He goes on to claim that only a small proportion of what is produced in Sicily is consumed by the provincial population, with large amounts of field crops, cattle, hides and wool finding their way to the Roman market. Interestingly, this passage emphasises the new commercial opportunities created by Sicily's incorporation within the Roman empire rather than the exploitative nature of the Roman system of taxation.[126]

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that at least some Sicilian cities used similar legal devices to co-opt wealthy members of the elites of other cities. Wilson (1990: 156) himself argues that in the course of the first and second centuries CE the territories of many abandoned towns must have been distributed among neighbouring cities still in existence. It does not seem implausible that territorial incorporation was sometimes accompanied by the bestowal of local citizenship.

125 Strabo 6.2.7.

126 For a balanced survey of the Sicilian export trade during the late Republic, which acknowledges the important role played by merchants from the Italian mainland while leaving ample room for Sicilian traders see Scramuzza 1937: 298–302; cf. ibid. 312–314 on Sicilian tax-farmers and money-lenders. Paterson 1998: 150, correctly stresses the big profits made by Roman businessmen but ignores the lucrative activities of Sicilian landowners and merchants (cf. Wilson 2000a: 144–145). Some of the exported items listed by Strabo must have originated from estates, herds or flocks owned by members of the senatorial or equestrian elite who did not live on the island. But while the existence of properties

What is more difficult to explain is why only some coastal cities prospered whereas others declined. With the exception of *Messana*, all the major cities of Classical, Hellenistic and Roman Sicily were situated in areas which had large tracts of fertile land.[127] Yet on the south coast of early-imperial Sicily only *Agrigentum* survived as a large city, whereas *Heraclea Minoa*, *Phintias* and *Camarina* declined.

Part of the answer must be that, in addition to serving as ports for the shipment of Sicilian goods, some Sicilian cities functioned as nodal points in the complex maritime networks that linked central-western Italy with other parts of the Mediterranean world. The prosperity of *Messana*, which did not have a large and fertile territory, reflects the vital importance of the Strait of Messina as a shipping lane for fiscal and commercial cargoes travelling to Rome, and the ports of Syracuse and *Catina* were well placed to receive ships from the Greek-speaking provinces and from eastern *Africa Proconsularis*. On the west and north-west coasts *Lilybaeum* and *Panormus* played a similar role on one of the shipping routes between central and western *Proconsularis* and Italy.[128]

There are also indications that a small group of coastal cities, including the five cities just mentioned, had come to surpass the other port cities of the island by the early first century BCE. In his Second Verrine oration Cicero enumerates eight Sicilian port cities, namely Syracuse, *Agrigentum*, *Lilybaeum*, *Panormus*, *Thermae Himeraeae*, *Halaesa*, *Catina* and *Messana*.[129] Although he says that there were some more ports, he clearly names those which he regards as the most important. It also appears from the Verrine orations that large communities of Roman citizens (*conventus civium Romanorum*) resided in five of these cities (Syracuse, *Agrigentum*, *Lilybaeum*, *Panormus* and *Messana*).[130] The obvious explanation is that all of these cities were ideal bases for Italians with

owned by Roman senators and *equites* is not in doubt (e.g. Scramuzza 1937: 338 and 363), the importance of this phenomenon cannot be assessed on the basis of the surviving evidence.

127 It should, however, be noted that Messana seems to have controlled the plain of *Mylae*/Milazzo.

128 For good discussions of various routes connecting North Africa and the eastern Mediterranean with Rome via the strait of Messina and the west coast of Sicily, see Bonora Mazzoli 2002 and Mosca 2002. For Syracuse and *Lilybaeum* see Pfuntner 2013: 32–40. The presence of substantial amounts of African red-slip ware at *Agrigentum* shows that this city maintained close contacts with North Africa between the second and early seventh centuries CE; see Malfitana et al. 2013: 431–432.

129 Cic. 2 *Verr*. 2.185.

130 Scramuzza 1937: 338–339.

business interests in Sicily because they were situated on the interface between the island and the western Mediterranean. It cannot be a coincidence that Cicero's shortlist of prominent Sicilian ports includes the seven largest cities of early-imperial Sicily, with number eight (*Halaesa*) representing one of the more important small cities of the first and second centuries CE.

Of the coastal cities which flourished during the early Empire *Tauromenium* and *Tyndaris* do not appear on Cicero's list. When Cicero composed his Verrine orations, *Tauromenium* had a small community of Roman citizens, and *Tyndaris* has been identified as the assize centre for north-eastern Sicily.[131] In the early-imperial period *Tauromenium* appears to have had a built-up area of about 20 ha, but *Tyndaris* was a small city, with perhaps only 10 ha of built-up space.

To judge from the archaeological evidence available at present, the decline of many of the port cities of the south coast, which left *Agrigentum* as the only surviving major city, was more or less complete by the end of the first century BCE. On the north coast the site of Classical and Hellenistic *Calacte* seems to have been abandoned by the mid-first century CE, and the site of late Classical, Hellenistic and early-imperial *Soluntum* experienced a similar fate in the late second or early third century CE. While the combined literary and archaeological evidence leaves no doubt that a small group of coastal cities continued to flourish, we must also account for the decline of various other cities of the coastal districts.

Since the coastal cities of Sicily were set in different natural landscapes, and also because each city had its unique history, we cannot expect to find a general explanation capable of accounting for all cases of urban decline or abandonment. Nonetheless some general tendencies can be discerned.

One of the regularities which seem to emerge is a settlement shift from hill-top locations to flat areas which were situated directly on the coast. Like many towns of the interior districts, some cities of the coastal districts, such as *Soluntum* and *Calacte*, were situated on waterless hill-tops. Following the establishment of the *pax Romana* there was a strong incentive to move down onto the coastal plain, which offered easier access to drinking water and to harbour facilities. However, as in the case of many land-locked cities, settlement shift to more convenient coastal locations seems to have been accompanied by the disappearance of local elites. Why did this happen?

131 Roman citizens at *Messana*: Scramuzza 1937: 337–338; for the identification of *Tyndaris* (rather than *Messana*) as the *conventus* centre of north-eastern Sicily: Kunkel and Wittmann 1995: 367 n. 225.

Although I do not claim to have a perfect answer to this question, I would like to suggest that variations in city size might be part of the reason why some coastal cities did better than other cities. After its foundation in the 280s BCE, the coastal city of *Phintias* acquired an *agora*, a gymnasium and no doubt various other public amenities. However, if late-Republican *Agrigentum* was considerably larger than *Phintias*, it might well have attracted members of the latter city's elite, simply because it offered a wider range of public amenities, better economic opportunities and a more rewarding social and cultural life.[132] Similarly, Hellenistic *Soluntum* was equipped with an impressive array of public amenities, including an *agora*, a theatre, a gymnasium and temples. However, the simple fact the city was at least two times smaller than *Panormus* and three times smaller than *Thermae Himeraeae* must have meant that the latter cities were economically and socially more vibrant. Therefore members of *Soluntum*'s local elite may well have perceived these large cities as attractive places to build up a new life. As I have already explained, I am more optimistic about levels of elite mobility in early-imperial Sicily than Wilson.

I started my survey of the cities of Roman Sicily with a brief reference to the ongoing debate concerning the economic and social impact of Roman rule on the island. As far as I can see, there is little point in trying to decide whether the decline of many cities of the interior districts and that of a smaller proportion of the coastal cities was a positive or a negative development. What cannot be denied, however, is that the five-hundred-year period between 300 BCE and 200 CE witnessed a drastic reconfiguration of the urban system of Sicily, and it also seems clear that this transformation was driven by Sicily's integration within the political economy of the Roman Empire.

132 For the gymnasium of *Phintias* see *IG* XIV, 256 (first century BCE). La Torre 2005: 113 speculates that the conquest of Egypt may have had a negative impact on *Phintias* because it reduced the importance of the city as an exporter of grain, but this theory cannot explain why *Phintias* declined much more severely than *Agrigentum*. The harbour of ancient *Agrigentum* (cf. Strabo 6.2.5) has not been excavated, but large amounts of imported ceramics (e.g. Malfitana et al. 2013: 431–432) suggest strong maritime connections.

Appendix: Cities of Roman Sicily

Cities and communities mentioned in Pliny the Elder's Survey of Sicily

Very Large Cities (> 80 ha)

1. *Agrigentum* (Agrigento): urban area c. 625 ha according to Fischer-Hansen et al. (2004), but area enclosed by the city walls 450 ha according to Hansen (2006: 107) and Bordonaro (2012: 136). Built-up area of Classical city c. 255 ha according to Hansen (2006: 44 n. 36); c. 250 ha to judge from Belvedere & Burgio (2012: Fig. 41). Area occupied by Roman city 80–100 ha according to Wilson (1990: 170); c. 100 ha according to Wilson (1996: 152). As pointed out by Belvedere et al. (2010–2011: 210–211), the survey data point to 'un notevole restringimento dell'area urbanizzata della città romana rispetto alla città di età greca'; see also Bordanaro (2012: 137). On Rupe Atenea (in the north-eastern part of the walled area) no materials postdating the third century BCE have been found (Wilson 1988: 178), but since some of the original soil seems to have been removed, it remains hazardous to draw any conclusion concerning the occupational history of this part of the city (Bordonaro 2012: 136).
2. *Catina* (Catania): area enclosed by sixth-century city wall c. 34 ha according to Tortorici (2008: 118), but 60–65 ha according to Frasca (2015: 169). Area occupied by Roman *Catina* 110 ha according to Wilson (1988: 143 n. 177); 128 ha or 130 ha according to Wilson (1990: 171) and (1996: 151 n. 92), but his map (1990: Fig. 134.2) shows an area of approximately 115 ha. In part because there is no evidence to suggest that the Roman city extended southward beyond the Castello Ursino, Privitera (2009: 49 and 58) regards Wilson's estimate of 130 ha as being on the high side. Cf. Tortorici (2008: 93–103) for a good discussion of the circus, which was manifestly extra-urban. Since there is no evidence to suggest that the Roman city extended westward beyond the modern Via Plebiscito (Privitera 2009: 49), the area occupied by early-third century *Catina* might not have been much larger than the 78 ha enclosed by the wall of the late fifteenth century (Mazza 2008: 180). For all these reasons it seems wise to lower Wilson's estimate to c. 90 ha. It was one of the most vibrant cities of Roman Sicily according to Branciforti (2010: 246).
3. *Lilybaeum* (Marsala): size of walled and inhabited area 80 ha according to Wilson (1988: 143, n. 177); 77 ha according to Wilson (1990: 171) and (1996: 152); c. 90 ha to judge from Giglio (2006: Fig. 61).
4. *Syracusae*: area enclosed by Archaic and fifth-century city wall (*Ortygia*

plus Achradina) c. 135 ha to judge from Basile (2012: 205–209). Built-up area 150 ha in late fifth century BCE, rising to 200 ha in Hellenistic period according to Fischer-Hansen et al. (2004: 228), but possibly as large as 325 ha in the (late-Classical or Hellenistic) period of maximum expansion according to Muggia (1997: 58) and Hansen (2006: 42), both following Drögemüller (1969: 113–114). A recent re-examination of the boundaries of the Hellenistic city (Basile 2012: 212–216) confirms this estimate as being of the right order of magnitude. Area occupied by Roman city c. 100 ha according to Wilson (1988: 143, n. 177) but 280 ha according to Wilson (1990: 171), after abandonment of the area north of the *decumanus* running east and west from Piazza della Vittoria (Wilson 1990: 39). Only 245 ha to judge from Wilson (1990: Fig. 134.1), but since *Ortygia* no longer was a residential quarter in late-republican and early-imperial times, this estimate must be lowered to c. 200 ha. A recent survey of all of the archaeological evidence relating to Roman Syracuse (Piazza 2009) has confirmed Wilson's reconstruction as basically correct. Basile (2012) argues that the ancient isthmus linking *Ortygia* and *Achradina* occupied the same place as its modern successor and that the area of the present-day Borgata Santa Lucia was a peripheral quarter dominated by workshops rather than a residential area. Dimensions of Augustan amphitheatre: 140 × 119 m.

Large Cities (40–80 ha)

5. *Messana* (Messina): built-up area of Archaic and Classical city c. 50 ha according to Scibona (1986: 453); 50–60 ha according to Fischer-Hansen et al. (2004: 235); area enclosed by city wall of early fourth-century BCE c. 25 ha to judge from Wilson (1990: Fig. 134.3). Area occupied by Roman city, which was situated to the north of the Archaic and Classical city, perhaps 100 ha according to Wilson (1990: 382 n. 78) and (1996: 152). However, if the built-up area of Roman times was bounded by the modern Via Cannizzaro on the south and the Via Pozzo Leone on the north, and if it did not extend westward beyond the Colle della Caperrina (Scibona 1986: 455; cf. Fuduli 2012: Fig. 14), the Roman city must have occupied approximately the same area as that enclosed by the Norman city walls (c. 60 ha).
6. *Thermae Himeraeae* (Termini Imerese): size of area enclosed by the walls of the fourth century BCE unknown, but perhaps no more than 15 ha to judge from the location of the cemeteries and the lack of Classical and Hellenistic finds in the area of the Colle Santa Lucia. Since the steep eastern and south-eastern slopes of the acropolis are unlikely to have

been built over, the built-up area might have been only c. 13.5 ha; cf. the hypothetical map in De Vincenzo (2013: Fig. 33). Size of area occupied by Roman city 60 ha according to Wilson (1985: 143 n. 177) but 52 ha according to id. (1990: 382, n. 78), following expansion in the early-imperial period (ibid. 170). Built-up area, including acropolis, approximately 50 ha to judge from Chiovaro & Rondinella (2017: Fig. 1). For the southern and eastern limits of the Roman city see Burgio (2008). Dimensions of amphitheatre 99 × 75.5 m. (Belvedere 1997).

Medium-Sized Cities (20–40 ha)

7. *Panormus* (Palermo): walled area c. 40 ha according to Wilson (1988: 143, n. 177); 48 ha according to id. (1990: 171), but only 36 ha to judge from the map in Belvedere (1987) and 34 ha to judge from Spatafora (2003: Tav. CLXXXIV). There is no evidence for the existence of suburban quarters during the early Empire (Wilson 1988: 155). As noted by Spatafora (2003: 1175–1176), some scholars arrive at a higher estimate by placing the *Neapolis* outside the wall circuit of the Cassaro, but the current consensus is that this quarter is to be identified with the eastern part of the Cassaro (Belvedere 1987: 290–291). Substantial amounts of pottery of the fourth and third centuries BCE have been found in the area between the Basilica San Francesco d'Assisi, the Via Alloro and the western edge of the Piazza Marina (di Stefano 1997: 592–593), but the small size of this area (c. 3.5 ha) militates against identification with an extra-mural *Neapolis*.
8. *Tauromenium* (Taormina): area enclosed by Classical city walls c. 65 ha according to Fischer-Hansen et al. (2004: 232). Built-up area of Roman city 28 ha according to Rizzo (1928: 301); 29 ha according to Wilson (1990: 382, n. 78); but only c. 20 ha to judge from Campagna (2014: Fig. 2), if the empty parts of the hill on which the theatre stands are excluded. For a detailed plan of the western part of the city see Campagna (2008). Diameter of Roman theatre 109 m.

Small Cities (< 20 ha) and Non-urban Communities

9. *Aceste*: unlocated (Wilson 1985: 335). In view of the connections with the Trojan legend a location in western Sicily seems likely. Zehnacker (2004: 192 and 206) speculates that Pliny's *Acestaei* might have inhabited a district near Segesta which did not form part of the Latin community of the *Segestani*.
10. *Acrae* (near Palazzolo Acreide): walled (and inhabited?) area of Archaic, Classical and Hellenistic city 35 ha according to Fischer-Hansen et al.

(2004: 190). A shadow of its former self, but still one of the more important small towns of Roman Sicily according to Wilson (1985: 201) and id. (1990: 154). Few traces of occupation during Republic or early Empire according to Chowaniek et al. (2009: 123).

11. *Aetna/Inessa*: unlocated (Fischer-Hansen et al. 2004: 185). Sometimes identified with the settlement of Cività di Paternò, whose walled area occupied an area of 24 ha. At this site houses of the sixth and fifth centuries have been excavated, but it seems to have been abandoned in the mid-fourth century BCE. Dimensions of inhabited area at least 850 × 535 m. (45+ ha) if *Aetna/Inessa* was at Poggio Còcola/Poira, where remains of another urban centre of the sixth and early fifth centuries BCE and traces of a small Hellenistic settlement have been found (Spatafora 1997: 1278; Maniscalco 2012: 46–48). So far no late-Hellenistic or Roman ceramics have been detected at this site (Rizza 1959: 473, n. 290). Since the dates of these settlements make identification of either with the *Aetna* of the Verrine orations problematic, it is tempting to follow Beloch (1914: 129, n. 2), Wilson (1990: 45) and Uggeri (2004: 249) in placing Aetna at the site of modern Paternò, which is usually identified with *Hybla Gereatis*. Cf. Strabo's claim (6.2.3) that *Aetna/Inessa* was 80 *stadia* (14.25 km) from *Catina*. *Hybla* might have occupied the site of Cività until 339 BCE (cf. Diod. 16.82.4), and the inscribed statue base from Paternò mentioning Venus Victrix Hyblensis (*CIL* X, 7013) might be explained as an example of neighbouring communities sharing the same cult. If Paternò's Classical/Hellenistic predecessor extended from the Collina Storica to the Falconieri quarter (Maniscalco 2012: 52), it would have occupied an area of at least 15 ha. Most finds from the city have been dated to the fifth-to-second centuries BCE.

12. *Agathyrnum* (near Capo d'Orlando): perhaps a subordinate settlement in the territory of *Tyndaris* rather than a self-governing town (Pais 1888–1889: 230–231; Manganaro 1988: 20; Pinzone 2004: 19; Fasolo 2013: 95–96).

13. *Agyrium* (Agira): a city of lesser importance (ἐν ταῖς ἐλάττοσι πόλεσιν) according to Diod. 16.83.3. Walled area perhaps c. 30 ha if the theatre was intra-urban and if the entire plateau below the acropolis was fortified (cf. Patané 1992). Occupied from Archaic period until third century CE (Bonanno 2012).

14. *Assorus* (Assoro): walled area c. 16 ha to judge from Wilson (1990: Fig. 129.3). Most finds recorded in and around Assoro are Classical or Hellenistic. At least one early-imperial burial; some lamps of the second century CE.

15. *Bidis*: possibly to be identified with Poggio Biddini (di Stefano 1976–1977); small according to Cic., 2 *Verr.* 2.53, but equipped with a *palaestra* (ibid. 54).
16. *Cacyrum*: 15 ha if to be identified with Monte Saraceno di Ravanusa (Adamesteanu 1957; Calderone 1996: 2 and 42; Fischer-Hansen 2004: 180).
17. *Calacte* (Caronia and Marina di Caronia): the *Galatini* of Pliny's survey are usually identied as the inhabitants of *Calacte* (Wilson 1990, 159). Built-up area c. 20 ha according to Collura 2012: 6 (based on maximum width and maximum length), but only c. 8 ha to judge from his map on p. 2. According to Collura (2012: 4), the hill top settlement of Caronia was abandoned at the end of the first century CE. Its place was taken by a new coastal settlement which occupied c. 10 ha (ibid. 5).
18. *Camarina* (Camarina): area enclosed by wall circuit of fourth century 150 ha according to Fischer-Hansen et al. (2004: 204); 145 ha according to Muggia (1997: 97); built-up area 72 ha according to Muggia (1997: 97). During the first century BCE only the area between the temple and the *agora* was used for habitation. In its death-throes by the early Augustan period according to Wilson (1990: 37).
19. *Centuripae* (Centuripe): built-up area 28 ha according to Wilson (1990: 382, n. 78 and 80), on the assumption that the Roman city covered about the same area as its modern successor, but only c. 18 ha to judge from Wilson (1990: Fig. 129.7). Cf. Frasca (2006: 193, Fig. 1) and Patané (2006: Fig. 4). Excavations carried out near the end of the western spur of the hill and on the eastern spur immediately to the east of the Monte Calvario have revealed remains belonging to peripheral quarters of the Hellenistic city which were destroyed in the first century BCE and not reoccupied (Patané 2006 and 2010).
20. *Cephaloedium* (Cefalù): referred to as a 'small town' (*polichnion*) by Strabo 6.2.1; walled area c. 10.5 ha according to Wilson (1990: 159 and 382, n. 78).
21. *Cetaria*: small according to Cic., 2 *Verr.* 3.103. Identified with Tonnara di Scopello by Holm (1898: 481), and more recently by Internicola & Corso (1993), but tentatively placed at Terrasini/San Cataldo by Purpura (1974: 58–59), and Wilson (1990: 145), and at Castellamare del Golfo by Maurici (2003: 887). Purpura (1982: 60 n. 35) concludes that the whereabouts of *Cetaria* remain uncertain. Gargini & Vaggioli (2003: 99) argue that *Cetaria* cannot have been the same place as the *Cytattarium* of the Entella decrees.
22. *Drepanum* (Trapani): walled area c. 16.5 ha if the Punic walls followed the same course as the Normannic fortifications (del Bono & Nobili 1986: 13), but perhaps c. 18 ha if the Roman city extended westward beyond the

modern Via Torrearsa, as argued by Filippi (2005: 126); cf. de Vincenzo (2013: 97, Fig. 35); but see the doubts expressed by Maurici (2009).

23. *Echetla*: in border region between *Leontini* and *Camarina* (Diod. 20.32.1–2, but the *Codex Florentinus* has *Neaitinen* instead of *Leontinen*); sometimes identified with Terravecchia di Grammichele, a tiny settlement of c. 6 ha (including the acropolis), but this identification rests solely on similarity with the medieval toponym Occhiolà (cf. Manni 1976: 609), and Terravecchia seems to have been abandoned in the late fourth or early third century BCE (Orsi 1897b: 203–206; Patané 2000: 95; Barra Bagnasco 2006: 36; Piazza 2009: 77; Camera 2010: 117). Schubring (1873: 112–113) identified *Echetla* with modern Vizzini or Licodia. In the former town Orsi's investigations revealed graves of the third-to-second centuries BCE (Orsi 1902; Pelagatti et al. 1996: 569 n. 354). Licodia peaked in the sixth and early fifth centuries BCE and seems to have been abandoned after the mid-fourth century BCE (Bonacini 2007: 135). Since *Echetla* was evidently a place of major strategic importance (Pol. 1.15.10), the stronghold of Piano dei Casazzi (10 ha) might also be considered as a possible candidate.
24. *Engyum*: usually identified with Troina (Wilson 1990: 145; Manganaro 1996: 130; Hansen & Nielsen 2004: 191); area enclosed by wall of fourth century BCE c. 20 ha to judge from Wilson (1990: Fig. 129.4), but c. 15 ha if the fortifications extended from the Piazza Conte Ruggero to the Piazza Santa Lucia (like the Normannic fortress) and if the Roman baths at the site of the ruined church of the Madonna della Catena were just outside the wall circuit (Bernabò Brea 1975: 17). According to Wilson (1990: 145), much more early-imperial material was found at Troina than at Assoro.
25. *Entella*: walled area 40 ha according to Nenci (1996: 129); cf. Wilson (1990: Fig. 129.14). According to Vaggioli (2001: 61), the city of the fourth and early third centuries BCE comprised an area of 15 ha which was densely occupied and a neighbouring zone of 12 ha where artefact density was markedly lower. During the late third and early second centuries BCE new houses were built in the southern half of the eastern part of the plateau, but between the early first century BCE and the mid first century CE, the settlement contracted to a small area near the site of the medieval castle. From the mid or late first century *Entella* was completely abandoned (Canzanella 1996: 227; Michelini 2003). No monumental buildings erected in Roman period according to Nenci (1996: 127).
26. *Ergetium*: unlocated according to Wilson (1985: 335) and Hansen & Nielsen (2004: 176–177). Candidates include Caltagirone (Zehnacker 2004: 202), Ramacca (Manni 1976: 615), Grammichele (Manganaro 1996: 133–134) and Ferla, where a Christian epitaph referring to the *ekklesia Ergitane*

has been detected (cf. Polyaen. 5.6, suggesting that *Ergetium* was close to the Laestrygonian plain). Giangiulio (1983: 825, n. 120) prefers a location somewhere to the north-west of Ferla.

27. *Eryx*: area enclosed by Elymian-Punic walls c. 9.5 ha to judge from Blasetti Fantauzzi & de Vincenzo (2012). Although Pliny mentions the *Erycini* among the land-locked communities of Roman Sicily, *Eryx* might have become a *vicus* of *Segesta* in the imperial period (Wilson 1990: 154). Sparsely inhabited according to Strabo 6.2.6; abandoned according to De Vincenzo (2018: 230–231).
28. *Gelani*: descendants of the old population of *Gela*, who formed a separate community from *Phintias* (Manganaro 1980: 461 n. 225).
29. *Hadranum* (Adrano): area enclosed by wall of early fourth century BCE, 60 ha according to Wilson (1988: 197) and Fischer-Hansen et al. (2004: 183). About half of this area was built-over. Unimportant but not deserted in imperial times according to Wilson (1988: 197); Roman city smaller than Hellenistic predecessor but reasonably prosperous according to id. (1990: 151) but the only evidence of urban continuity within the walled area is *AE* (1962: 314), which *may* refer to local decurions taking action in regard to an *aedes* (the inscription has the enigmatic abbreviation D^{R} D^{R}). Walled area no longer inhabited after second century BCE, but area near extramural bath complex reoccupied in mid-imperial period or Late Antiquity according to Arcifa (2009: 186–190). In a forthcoming article Massimo Cultraro argues that shortly after 263 BCE a new town (occupying 45 ha) was built immediately to the NE of the old city. He thinks this new town survived until the late Flavian or early Trajanic period.
30. *Halaesa* (near Castel di Tusa): referred to as a 'small town' (*polichnion*) by Strabo 6.2.1. Built-up area 16 ha according to Wilson (1990: 382 n. 78). According to Wilson (1988: 176) and id. (1990: 150), *Halaesa* experienced its heyday during the late Republic and was in slow decline from the time of the middle Empire. Burgio (2007: 60) interprets Strabo 6.2.1 as pointing to 'una contrazione nella prima età imperiale', but also sees signs of continued urban vitality.
31. *Halicyae* (Salemi): to judge from Vecchio et al. (2003) occupation of the town became very sporadic after the first century BCE.
32. *Haluntium* (San Marco d'Alunzio): walled area 15 ha. According to Wilson (1995–1996: 84) the city expanded beyond its wall circuit in late-Hellenistic times, but went into decline in the first century CE.
33. *Henna* (Enna): to judge from Wilson (1990: Fig. 129.2), the rock of Enna occupied an area of c. 100 ha, but as Wilson points out, it is uncertain how densely settled this area was in Antiquity. In the eleventh and twelfth

centuries CE, when Enna had become the most important city of central Sicily, the built-area was no larger than c. 40 ha (Patti 2016). The only archaeological evidence for the Roman city consists of (unpublished) finds of early-imperial terra sigillata from two sites in the northern part of the city (Valbruzzi & Giannitrapani 2015: 42). Based on the size of the subterranean *columbaria* of early-imperial and late-Roman times Valbruzzi & Giannitrapani (2015: 43) suggest that Enna might have occupied the entire plateau, but Strabo 6.2.6 reports that the city was sparsely inhabited.

34. *Herbessus* (Montagna di Marzo): 19 ha according to Wilson (1990: 382 n. 78). Wilson (1990: 52) points out that burials stop after the first century CE.
35. *Herbita*: possibly to be identified with the settlement of Monte Alburchia (Wilson 1990: 149; Gargini & Vaggioli 2003: 105–106; Collura 2016b), which occupied an area of c. 18 ha (Collura 2016b: 14). This settlement seems to have flourished in the fourth and third centuries BCE but to have contracted in the second century BCE.
36. *Herbula*: unlocated.
37. *Hippana* (Montagna dei Cavalli): walled area almost 30 ha according to Fischer-Hansen et al. (2004: 201); cf. Vassallo (2012: 210) and Wilson (1990: Fig. 129.13). Inhabited area c. 25 ha.

38a. *Hybla Heraea*: most often identified with Ragusa Ibla (Wilson 1990: 152; Hansen & Nielsen 2004: 177). Walled area c. 25 ha to judge from Wilson (1990: Fig. 129.10).

38b. *Hybla Gereatis*: usually identified with Paternò (Hansen & Nielsen 2004: 177; Maniscalco 2012: 16), but see above, s.v. *Aetna*. A village (*kômê*) in the territory of *Catina* according to Paus. 5.23.6. *Hybla* is also mentioned in a Christian epitaph from Catania which has been dated to the late third century CE (*CIL* X, 7112).

39. *Iaetas* (Monte Iato): walled area 50 ha according to Wilson (1990: 382 n. 78), but 40 ha according to Nenci (1996: 129). As pointed out by De Vincenzo (2013: 69), the western part of this area was not built over. In steep decline by mid-second century CE according to Wilson (1995–1996: 108). No longer a fully-functioning 'town' in the accepted sense of that word, but still inhabited according to Wilson (1990: 144).
40. *Imachara*: often placed at or near the Rocca di Serlone/di Serro near Nissoria, where a *caduceus* identifying itself as 'the public property of the *Imacharaioi*' was found (Wilson 1990: 145; Manganaro 1996: 144), but there is no trace of an ancient settlement here. Morel (1963: 294) opts for the *contrada* Picinosi, c. 4 km north of Assoro. A third possibility is the *contrada* Vaccarra, which was occupied in Classical and late-

Roman/early-medieval times and seems to correspond to the stronghold of *Maqârah*/*Baqârah* referred to by Al Idrisi (Wilson 2000b: 716; Uggeri 2004: 282; Patti 2011: 69; Collura 2016b: 12). The site of present-day Nicosia has also been suggested as a candidate for *Imachara* (e.g. Beloch 1907). Occupation of this site started in the sixth century BCE and seems to have intensified in the late fourth and early third centuries BCE, when Nicosia's predecessor might have occupied an area of c. 15 ha (Collura 2016b: 11–12). Patti (2012: 200–201) rejects all existing attempts at identification as speculative.

41. *Leontini* (Lentini): area enclosed by wall circuit of the sixth century BCE 40 ha according to Fischer-Hansen et al. (2004: 210), but area occupied by city of the fifth-to-third century BCE 60 ha according to Frasca (2012: 176). According to Wilson (1990: 23), the city petered out between 50 BCE and 50 CE.
42. *Macella*: area enclosed by Archaic wall 20–25 ha on the plausible assumption that *Macella* is to be identified with Montagnola di Marineo (Gargini & Vaggioli 2003: 102). Habitation no longer urban after destruction in First Punic War according to Spatafora (1994: 94) and (2009).
43. *Megara Hyblaea*: area enclosed by Archaic and Classical wall 61 ha but built-up area only 25 ha according to Hansen (2006: 42); area enclosed by late-third century fortifications 12 ha according to Fischer-Hansen et al. (2004: 215). There is some evidence for continued occupation between the early second century BCE and late Antiquity (Vallet et al. 1983; Cacciaguerra 2007), but this was no longer urban. Cf. Wilson (1988: 189).
44. *Menae* (Mineo): area enclosed by Archaic wall c. 17 ha to judge from Wilson (1990: Fig. 129.8). Gradually deserted in early Empire according to Messina (1971: 119–120), id. (1979: 17) and Wilson (1990: 52).
45. *Murgantia* (Morgantina): area enclosed by walls of Classical and Hellenistic city 78 ha and built-up area 57 ha according to Stone (2014: 12). Between 211 BCE and the early 30s BCE the built-up area shrank to about 20 ha, and after the mid-30s BCE Murgantia survived only as a village. Tsakirgis (1995: 143) reports that the latest pottery found at Morgantina consists of Roman wares dateable to the reign of Tiberius or Claudius.
46. *Mutyce* (Modica): di Stefano (1982–1983: 339) reports finds of Roman-imperial date from the town, and Wilson (1985: 320) suggests that *Mutyce* might have survived until the late second century CE, but the appearance of a large necropolis at near-by Treppiedi in the second century CE (di Stefano 2009) suggests de-urbanisation.
47. *Mylae* (Milazzo): inhabited area c. 8 ha and area occupied by acropolis c. 4 ha during third-to-third centuries BCE to judge from Tigano (2011:

Fig. 13). The eastern necropolis contains graves of the third-to-first centuries BCE and seems to have gone out of use in the Augustan period; to date the only civic building of early-imperial date within the urban area is a fish-salting establishment which was discovered in *contrada* Vaccarella (near the harbour). See Tigano (2002), (2003) and (2009) and Fuduli (2006). In Classical times perhaps a dependent *polis* controlled by Messana (Fischer-Hansen et al. 2004: 216–217). Under the Empire probably a *vicus* of *Messana* rather than a self-governing city (Beloch 1889: 14–15 and 75; Manganaro 1988: 20; Pinzone 2002: 122 n. 58).

48. *Myttistratum* (Monte Castellazzo di Marianopoli?): destroyed in 258 BCE. Walled area 4.5 ha according to Muggia (1997: 102 n. 212). There is evidence of continued occupation after the First Punic War (Fiorentini 1980–1981 and 1984–1985), but this was no longer urban in character.
49. *Naxii*: descendants of the old population of Naxos who formed a separate community from *Tauromenium* according to Manganaro (1980: 461 n. 225).
50. *Netum* (Noto Antica): to judge from Arcifa (2005: 16–17, Figs. 2–4), the walls of early-modern Noto enclosed an area of approximately 70 ha, two thirds of which (c. 45 ha) were built over. Cf. Wilson (1990: Fig. 129.11) which shows a walled area of c. 55 ha for the Hellenistic-Roman city. Based on ceramic finds Orsi (1897a: 78) suggested that Hellenistic *Neaition/ Netum* might have been about half as large as its late-medieval and early-modern successor, without ruling out the possibility that the Greek city might also have occupied the western half of the plateau. According to Wilson (1990: 152–153 and 157), early-imperial *Netum* was more important than many other land-locked towns of Roman Sicily and perhaps even comparable to *Centuripae* (ibid. 162), but while minor roads connected the former city with *Acrae* and Syracuse, and probably also with *Helorus* or another port on the south-east coast (Uggeri 2004: 16–19), *Centuripae* was situated on the far more important road from *Catina* to *Henna*. There is no archaeological or epigraphic evidence for new public amenities being constructed at *Netum* after the early second century BCE (Inglese 2014: 94–97). A wealthy citizen of *Netum* features in Cicero's list of Sicilians who were forced to set up weaving establishments working for Verres (2 *Verr*. 4.59), but citizens from the small towns of *Aetna* and *Helorus* also appear in this list. Two funerary inscriptions of imperial date from the suburban necropoleis, one of which commemorates a land surveyor (Manganaro 1962: 497–499), show that the town continued to be inhabited, but most of the graves discovered in the northern necropolis have been dated to the third or early second centuries BCE (Orsi 1897a: 81). Two

inscriptions from *Iasos* (*I.Iasos* 174, second century BCE) and Athens (*IG* II^2, 10292, first century CE) demonstrate connections with distant areas (Inglese 2014: 97–98), but there is nothing to suggest that early-imperial or mid-imperial *Netum* was larger or more important than *Halaesa*.

51. *Noae*: usually identified either with Monte Catalfaro (Messina 1970; Maniscalco 2005) or with Monte Iudica (Manni 1976: 615–616; Wilson 1985: 335; Fischer-Hansen et al. 2004: 180; rejected as speculative by Privitera 2009: 88). As pointed out by Manganaro (1974–1975: 17), the former site is very close to *Menae* (the distance being only 3.6 km as the crow flies) and might have been a subordinate settlement within the territory of that city. In a later article Manganaro (1996: 135) places *Noae* at Monte Balchino/*contrada* Altobrando (west of Mineo), where a 9 ha site has been detected. This settlement was destroyed in the mid-fifth century BCE, but in the mid-fourth century BCE a new agglomeration appeared some 800 m. to the SE of the archaic wall circuit (Bonacini 2007: 56). Uggeri (2000: 282) suggests the Montagna di Ramacca (c. 5.5 ha), which was destroyed around 500 BCE and abandoned after the fourth century BCE, but this settlement has also been identified as *Eryke*. Seminerio (1975) identifies *Noae* with Piano dei Casazzi, a settlement occupying c. 10 ha (Orsi 1907: 489) which flourished until the mid-third century BCE and was abandoned after the second century BCE (Belfiore 2000: 272). Orsi (1907: 489–490) gives the dimensions of the settlement of Monte Iudica, which peaked between 550 BCE and 450 BCE and was abandoned in the late fourth century BCE, as 1,500 × 50 m. (7.5 ha) and estimates the number of houses as approximately one hundred. The settlement of Monte Catalfaro was of similar size (8–9 ha) if it occupied the gently sloping area surrounding the eastern summit. A dense scatter of ceramics of the fifth-to-third centuries BCE has been observed in the western part of this area (Cirelli 1997–1998), and a large Hellenistic necropolis has been detected to the south-east of Monte Catalfaro (Cirelli 1997: 69). There is some evidence for much reduced occupation in the first century BCE and during the Empire (Bonacini 2007: 50).

52. *Paropus*: candidates include Monte Porcara (near Bagheria, east of Palermo), a 25 ha site which was abandoned in the mid-third century BCE (Manni 1981: 214–215), and Monte Riparato di Caltavuturo, where occupation came to an end around the turn of the first centuries BCE and CE (Wilson 1990: 145). Monte Riparato has also been proposed as a candidate for the settlement of *Ambica*.

53. *Petra*: unlocated (Fischer-Hansen et al. 2004: 220). Diod. 23.18.5 suggests *Petra* was still a walled city in 254 BCE. Tentatively placed at or near Prizzi

by Wilson (1985: 334) but this would put *Petra* very close to *Hippana* (Gargini & Vaggioli 2001: 98). Giustolini (1999) identifies the *statio Petrina* with a 9 ha site at Casale di San Pietro (5 km east of Castronovo) and *Petra* with the settlement on Monte Kassar overlooking Castronovo (cf. Manni 1981: 216; Uggeri 2004: 100 and 108; Burgio 2015: 24). This settlement seems to have been unwalled and is believed to have been abandoned in the early fifth century BCE (Carver et al. 2017; but cf. Gargini 2001: 135, for possible traces of Punic re-occupation in the fourth and third centuries BCE). A coin bearing the legend *Petrinōn* found at Cammarata also suggests a location in the eastern part of the Elymian region. Questioning the prevailing view that *Petra* must have been situated near the *statio Petrina*, Gargini (1997) and Gargini & Vaggioli (2001) suggest the anonymous settlement of Monte Pietroso di Camporeale (occupied in the sixth-to-fourth centuries) as an alternative possibility. In the fourth century a small settlement appeared immediately to the north of Monte Pietroso, in the area of the *masserie Giardinello* and *Rapitalà*, but sherds of sigillata have also been found on the southern slopes of the hill. The settlement of *masseria Rapalità* has also been identified as the road station of *Longaricum*, but the majority view is that this road station was situated near Alcamo (Filippi 2002: 376).

54. *Phinthias* (Licata): possibly one of the larger cities of Roman Sicily according to Wilson (1990: 162) but built-up area of Hellenistic city only c. 30 ha to judge from the hypothetical map shown in La Torre (2006: 84, Fig. 2); cf. also La Torre (2017: 166, Fig. 2). Tavola 1 in Toscano Raffa (2017) shows a much larger urban zone of c. 100 ha, but this includes the areas occupied by the suburban necropoleis. To judge from Diod. 24.1.8 *Phintias* was the small harbour-less town (*polismation*) referred to by Pol. 1.53.10. While *Phintias* flourished between the time of foundation (c. 287 BCE) and the mid-first century BCE, recent excavations carried out on the southern slope of the Monte Sant'Angelo, where one of the residential quarters of the city was located, have revealed that many houses were abandoned during the second half of the first century BCE. Although nothing is known about developments in the lower city, La Torre (2008: 8) interprets the data available at present as indicating that the city experienced a severe contraction from the Augustan period, declining into 'un piccolo borgo nei pressi del porto'. Cf. id. (2005: 113).

55. *Schera*: small *civitas* according to Cic., 2 *Verr.* 3.103. Traditionally identified with Montagna Vecchia di Corleone, where a walled settlement occupying between 25 and 30 ha has been identified (Spatafora 1997: 1279–1281; Gargini & Vaggioli 2003: 100). Cf. Cutroni Tusa (2016: 220) who provides a

higher estimate of 40 ha for the walled area. However, as pointed out by Gulletta (1992: 382–383) and by Spatafora (1997: 1279–1280), this identification runs up against the difficulty that this site peaked in the sixth and fifth centuries BCE, with only sporadic evidence for continued occupation in the Hellenistic period (but see Trasselli 1969 for the view that the site was certainly occupied in the fourth and third centuries BCE), and no Roman or Byzantine material. Bronze coins discovered at the Montagna Vecchia have the legend *Kersinōn* (Cutroni Tusa 2016: 222–223) perhaps referring to a group of mercenaries. In the first century BCE two small nuclei (occupying areas of c. 2.2 ha and c. 1.8 ha respectively) appeared in the area below the Castello Sottano and Castello Soprano of Corleone (Badami & Carta 1993: 10–13).

56. *Segesta*: area enclosed by wall circuit of fifth century BCE 55 ha, and area enclosed by upper wall circuit of second or early first century BCE 32 ha according to Wilson (1990: 382 n. 78) and id. (1995–1996: 116–117); 35 ha according to Nenci (1996: 129). Theatre no longer kept in repair after early first century CE according to Wilson (1990: 154), who also points to the lack of ARS among surface finds on the hill of *Segesta*. As noted by Wilson (1988: 96), *Aquae Segestanae* emerged as the most important settlement of the region from the mid or late first century CE. The latter settlement occupied an area of only 3 ha (Bernardini et al. 2000: 113 and 117).
57. *Selinuntii*: *Selinus* was abandoned after its destuction during the First Punic War (cf. Strabo 6.2.6). As noted by Manganaro (1980: 461 n. 225), the *Selinunti* who appear in Pliny the Elder's list must be the descendants of the Greek community. During the Empire the secondary settlement of *Thermae Selinuntinae* (Sciacca) emerged as the most important central place of this region.
58. *Semelitani*: unlocated (Wilson 1985: 335).
59. *Soluntum* (Solunto): built-up area 14.5 ha according to Wilson (1990: 159), 18 ha according to di Leonardo (2007: 25); substantially a town of the second and early first century BCE according to Wilson (1990: 23–24); decaying in early Empire according to Tusa (1968), Wilson (1988: 201) and Wolf (2012).
60. *Symaethii*: unlocated, but presumably in the region of the river *Symaethus* (Wilson 1985: 335); cf. Ptol. 3.4.7: *Dymethus*?
61. *Talaria*: unlocated; a "city of the Syracusans" according to Steph. Byz.; near Syracuse according to Wilson (2000b: 727). Pais (1888–1889: 161) suggested a location in the gorge of the river Cassibile; Gubernale Apollo (1912) preferred *contrada La Gebbia-Borgelluzzo* (also known as *contrada Falari*),

where Greek and Roman coins, sarcophagi and traces of a settlement of the first-to-fourth centuries CE have been detected.

62. *Tissa*: unlocated (Wilson 1985: 335); placed in NE Sicily by Ptol. 3.4.7; perhaps to be identified with the Greek settlement at Imbischi-Acquafredda, 6 km east of Randazzo, which was destroyed in the third century BCE (cf. Privitera 2005); very small according to Cic. 2 *Verr.* 3.86.
63. *Triocala* (Caltabellotta): abandoned from mid-third century BCE according to Panvini (1988–1989) and Wilson (1995–1996: 93).
64. *Tyndaris* (Tindari): area occupied by Roman (and Classical?) city c. 14 ha according to Fischer-Hansen et al. (2004: 233); area enclosed by wall of fifth century CE c. 18 ha according to Wilson (1988: 143) but 27 ha according to id. (1990: 171). Built-up area c. 10 ha to judge from Belvedere & Termine (2005: 86, Figs. 1–2); cf. Spigo (2006: 98, Fig. 1).
65. *Tyracium/Tyracinae*: on the outskirts of Ispica/Spaccaforno Orsi found a Greek necropolis of the seventh-to-fifth centuries BCE (Orsi 1912: 360–361). Subsequently some ceramics belonging to the second century BCE as well as small amounts of early-imperial sigillata were discovered (Moltisanti 1950: 53). Some 9 km to the north-east of Ispica blocks belonging to a Hellenistic temple have been discovered in the wall surrounding the church of S. Pancrazio/S. Pancrati, and this has led Messina (1991) to identify this area as the site of *Tyracina*. Jean-Pierre Houel reports having seen 'a vast enclosure' belonging to a 'Greek city' in this area, but the graves and catacombs of this locality belong to the third-to-fifth centuries CE.
66. *Zanclaei*: Greek community in the territory of *Messana* which remained separate from the *municipium* according to Manganaro (1980: 461 n. 225).

Sicilian Communities Mentioned by Cicero but not by Pliny the Elder

1. *Amestratus* (Mistretta): in the imperial period during the Empire a *vicus* of *Halaesa* according to Wilson (1990: 149).
2. *Apollonia* (S. Fratello): built-up area 14–15 ha according to Collura (2016a).
3. *Capitium* (Capizzi): in early-imperial times a *vicus* of *Engyum* (Troina?) or *Imachara* (Nissoria?) according to Wilson (1990: 149).
4. *Helorus* (Eloro): walled and inhabited area 9 ha according to Fischer-Hansen et al. (2004: 195). Declining but not entirely dead during first centuries of the Empire: Wilson (1985: 198) and id. (1990: 157). Possibly already by the time of Augustus demoted to *vicus* status under the control of *Netum* according to Wilson (1990: 157).
5. *Heraclea Minoa* (Platani): area occupied by city of the sixth-to-fourth century BCE 60–70 ha, but area enclosed by Timoleontic wall 30–35 ha according to Fischer-Hansen et al. (2004: 197). In latter period built-up

area c. 20 ha (map 6 on final pages of Gabba & Vallet 1980). Abandoned before or around 20 BCE according to Wilson (1988: 100 and 189).

6. *Ina* (near Porticella di Reitano or at Cittadella di Vendicari?): the *Inenses* appear in Cic., *Verr.* 3.103, and *Ina* (or *Ena*) in Ptolemy 3.4.15. For the possible whereabouts of this locality see Holm (1898: 481–482); Uggeri (1997–1998: 342).

Other Cities Belonging to the provincia Sicilia

1. *Cossyra* (Pantelleria): area enclosed by wall of late third or early second century BCE, 2.16 ha according to Orsi (1899: 509). Scattered ceramics suggest that the small town (*polismation*) referred to by Polybius (3.96) occupied the slopes immediately to the west and north-east of the acropolis (ibid. 518). At least one house on the acropolis was abandoned before the mid first century CE (Osanna 2006).
2. *Gaulos* (Gozo): if the Roman city occupied the town centre of present-day Victoria, with the Triq Varjringa as its southern limit (Sagona 2015: 274), it cannot have occupied more than c. 8 ha.
3. *Lipara* (Lipari): walled and inhabited area 18 ha according to Wilson (1990: 171) and id. (1996: 152).
4. *Melita*: the Roman city seems to have occupied the area of the medieval fortress and the adjacent areas immediately to the south and south-west. If the Roman city was delimited by the Triq Santa Rita to the south and by the Tri Nikol Sawra on the east, it cannot have occupied more than c. 25 ha (Sagona 2015: 273). Cf. Bluet (1967: 39) for the view that the area occupied by the Roman city was roughly three times the size of the fortress of Mdina, which occupies an area of 6.65 ha.

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CHAPTER 9

Roman Towns and the Settlement Hierarchy of Ancient North Africa: A Bird's-Eye View

Matthew Hobson

> The town-centre of a *municipium* might have few or no permanent inhabitants and consist solely of the official buildings and market place, while a *vicus* might be a great urban agglomeration from which the *coloni* issued forth daily to their work in near-by or distant fields. Between these two possible extremes lie many variations. Roman Africa will be better understood when the excavated sites have been assigned to their due category, not lumped in a single formula.
>
> SHERWIN-WHITE 1944: 10

1 Introduction

This paper aims to describe the settlement system of Roman-period North Africa through the examination of over a thousand sites. In an attempt to avoid some of the problems associated with a traditional urban/rural dichotomy, I have chosen to allocate each ancient settlement within the dataset to a position within a multi-levelled hierarchy.[1] Sedentary settlements have been separated into eight classes, ranging from the largest, most important cities down to the smallest of anonymous hamlets. No single method of classification will satisfy all parties. The quotation from A. Sherwin-White above gives an indication of the complexities of the ancient North African settlement pattern. The work presented here began as part of a project focussing specifically on Roman towns, and this has had a considerable influence on the criteria chosen for differentiating the hierarchy. Three broad sets of criteria have been selected: the level of municipal autonomy granted to a settlement by the Roman State, the

1 Horden and Purcell 2000: 89–122.

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sophistication and splendour of its monumental architecture, and the size of its built-up area. The first two phenomena are closely linked with the historical context of the Roman period, and it should be stated at the outset that the aim has not been to produce a set of attributes which can be used to compare settlement systems cross-culturally throughout history. Furthermore, the emphasis remains firmly on the middle and upper parts of the settlement hierarchy, with a focus on producing a more nuanced picture of the emergent urbanism of the Roman period. The creation of a sophisticated typology of the lower, more rural parts of the settlement hierarchy has been left for another time. Archaeological survey conducted in recent decades has been used, however, to provide some smaller windows through which the full spectrum of the settlement system can be viewed in certain areas. What I want to emphasise here is that other approaches and systems of categorisation are entirely possible. The method employed allows the identification of various regional differences and the chance to offer some explanations for how they developed. At a minimum, it is hoped that this study may be heuristically useful and that it may help to stimulate new avenues of research in this area in the future.

2 Historiographical Note

> The last century, which preceded the Christian era, was for North Africa a period of misfortune and disasters. It was the imperial government which, faithful to the ideas of Caesar and Augustus, restored the ruined cities and gave impetus to the progress of urban life. The foundation of settlements, the creation of military posts, the establishment of a tight network of communication routes, the application of cadastration to the rangelands of nomadic tribes, of surveying principles and procedures, and lastly, above all, the necessary measures taken to impose peace, to safeguard it, and to guarantee the subjugated populations and the colonists future security: these were the essential acts by which the policy of the imperial government directly determined the birth, and indirectly promoted the growth, of a large number of African cities.
>
> TOUTAIN 1912: 346. Translation by the author

In the century since Toutain's synthetic works on the Roman town sites of North Africa appeared, many of the models through which we attempt to understand ancient progress and development have altered greatly.[2] Were the institutional

2 Hobson 2014; Toutain 1895.

structures of imperial government really so crucial to the developments that swept across North Africa in the centuries that followed the initial Roman conquest? While undoubtedly the way in which the empire was governed encouraged a certain kind of municipal organisation to take root, the extent to which town life was truly a new phenomenon is highly debatable. A current of 'postcolonial critique' flowing through Roman studies has identified the alarming extent to which colonial-period views of North Africa under the Roman Empire were inextricably linked with the modern experience of the French, British and Italian imperial powers. It is a shame to admit, therefore, that many works dealing with town life in the North African provinces still draw heavily on the explanatory paradigms of the colonial period.[3] While some worthy attempts at providing new theoretical models have appeared, we lack a grand synthesis which incorporates all of the available evidence and which is sufficiently broad in its geographical scope. Almost without exception syntheses on the subject of North African urbanism have taken a standard form. After some general introductory statements they tend to consist of a handful of case studies, focussing on the few towns for which we possess well-preserved monuments or considerable numbers of inscriptions.[4] Other works tend to either fall short of comprehensive coverage in terms of their geographical scope, or limit themselves to only one category of evidence or class of monument. Examples of this tendency are studies focussed only on the process of municipalisation or on monumental urban architecture.[5] In short, we are lacking a general synthesis on the urbanism of Roman-period North Africa which gives a general bird's-eye view of the spectrum of different types of towns that existed while redressing some of the fallacies of the colonial-period narrative.[6]

While one can certainly still find much of value in the explanations given by scholars of the modern colonial period for North Africa's urban and municipal florescence, significant adjustments and additions to the narrative are necessary in the twenty-first century. Ancient historians and archaeologists

3 Hugoniot and Briand-Ponsart 2005; Hugoniot 2000.

4 Bullo 2002; Sears 2007; Sears 2011; Laurence, Esmonde-Cleary and Sears 2011; Magalhães de Oliveira 2012; Lassère 2015: 367–400; Whittaker 1995; 1996: 603–610; 2000: 539–543.

5 Bomgardner 2000; Sear 2006; Blonce 2008; Thébert 2003; Daniels 1983; Leveau 1985.

6 If any greater clarity has been achieved here it is thanks to two major factors. Firstly, the grant from the European Research Council which allowed the 'Empire of 2000 Cities Project' to become a reality. It is within this five-year project (2013–2018) that I was able to collect a sizeable dataset relevant to this topic, and to reflect on it in the context of a supportive team. Secondly, advances in technology in the last 10 years have provided researchers with the means to map geographical, climatological and archaeological data simultaneously, with an ease and accuracy that was hitherto extremely difficult, if not impossible, to achieve.

writing during the colonial period often adhered the fallacious idea that, away from the coastal strip, North Africa lacked urban development prior to Rome's arrival. There were a number of factors involved in this. Firstly, the painstaking recovery and study of tens of thousands of Latin inscriptions from North African town sites allowed a sophisticated understanding of the chronological development of Roman North Africa's municipal development. Beginning with a pattern of colonial foundation that was primarily coastal under Caesar and Augustus, municipal promotions tended to follow the progress of the Roman military inland up to the second century CE. This gave the impression that Rome spread into the interior a cultivated urban life that had been brought originally by Phoenician settlers, and which previously had only been encouraged in certain inland regions by the Numidian kings. A naïve approach to the ancient written sources cultivated and reinforced this model. Prejudiced views based on geographical ignorance were absorbed from ancient writers such as Strabo (book 17), Pomponius Mela (1.20–48), Pliny (book 5) and Tacitus. The sources used by these authors contained far more information on the coastal areas of North Africa than on the interior. Consequently, the impression given in their writings is that only the peoples of North Africa's coastal zone shared similar customs with other civilised parts of the Mediterranean, and that inland, instead of sedentary settlements or towns, there existed only wandering bands of pastoral nomads and tiny hilltop settlements.[7] The point is laboured continually in the article of Toutain quoted from above.

A crippling lack of knowledge about the archaeology of urban sites in pre-Roman times has allowed this model to go unchallenged for too long. The measurement of urban achievement has been judged largely by evidence classes specific to the Roman imperial period. The high level of visibility of the surviving remains of Roman public architecture and engineering led to a diminished view of the architectural achievements of the Numidian, Punic and other settlements of the second and first centuries BCE. In the same way, the huge mass of surviving Latin epigraphic material relating to the public works of municipal magistrates and dignitaries is still often used to demonstrate the apogee of Rome's North African achievement, which in quantitative terms was reached during the late second and early third centuries CE.[8] Certainly the impression gathered from this form of evidence is striking, but it would be incorrect to assume that one can use quantitative variation in any single

7 Pomp. Mela 1.41.

8 The classic study for Africa Proconsularis during the first few centuries of Roman rule is that of Broughton 1929, followed by Lepelley 1979; 1981 for the Late Empire.

category of evidence as a simple proxy for urban development. It is not possible to judge by a lack of municipal or building inscriptions, for example, that little was occurring in North Africa in terms of urban or municipal development prior to the imperial period.[9] The smaller amount of Libyco-Berber, Punic and neo-Punic epigraphic material very rarely deals with subjects relating to political or municipal affairs, but this does not mean that such institutional structures were non-existent or that important urban monuments were not being erected.[10] Furthermore, it is known that different types of urban architecture drew investment in different periods. For example, one cannot rely on clearly visible remains of amphitheatres as a proxy for urban development in pre-Roman times. Recent work is demonstrating that many of the towns of Numidia were developing a sophisticated urban form with a range of monuments that demonstrate an eclectic mix of Mediterranean influences,[11] but the details of the earlier phases of such sites often require more detailed archaeological investigation to recover.

Probably the most significant alteration necessary to the colonial narrative, therefore, has been the acknowledgement of the long centuries of agricultural and urban development in North Africa's most densely populated zones, prior to the Roman conquest of 146 BCE.[12] Although beginning slowly to progress thanks to a number of important excavation projects at sites located in the interior, such as *Althiburos*,[13] Rirha[14] and Kitzan,[15] our knowledge concerning the settlement systems that preceded the Roman period is desperately thin. There is a gradual realisation, however, that the great number of towns in Roman North Africa existed largely thanks to the fact that sedentary settlement had such a long and strongly rooted development there during the first millennium BCE, perhaps extending back even earlier. As David Mattingly has recently put it, "The hundreds of Roman towns were literally built on hundreds of indigenous villages and proto-urban settlements", some of which were similar in size to their later descendants.[16]

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9 Hobson 2015a; 2015b; 2016.
10 Hobson 2019.
11 Ardeleanu 2014; 2015.
12 Hobson 2016.
13 Kallala and Sanmartí 2011; Sanmarti et al. 2012.
14 Callegarin et al. 2016. Recent excavations at this site have in fact revealed neo-Punic texts of a different character to those found on funerary stelae.
15 El Khayari et al. 2011.
16 Mattingly 2016: 16.

3 Collecting the Data

"Une typologie des villes pourrait s'appuyer sur diverse critères de classification".[17] So wrote the late J.-M. Lassère in his posthumously published *Africa, quasi Roma* (2015). Lassère went on to list the various criteria upon which a categorisation of towns could rest: the nature of the territory, its elevation, relief, richness, the cultural origins of the town, the various categories of municipal status, and so on. Lassère rightly rejected the idea that the hierarchy of municipal status could map onto the archaeological and economic reality of North Africa's hundreds of towns. Ultimately he chose to give a very schematic overview, distinguishing three main types—maritime towns, agricultural towns and military towns—leaving the work of a full classification based on multiple criteria for a future generation of scholars. Lassère's work is indicative of the general trend. We have many learned publications which characterise the different sorts of urban agglomeration present in North Africa during the Roman period, but which stop short of a comprehensive overview of the full data set. There are two main reasons for this approach to North African towns. The first is that the task of data collection can fairly be described as gargantuan. The region selected for investigation is vast, stretching from Morocco in the far west to Libya's border with Egypt in the east, and encompassing some 400,000 km^2. Even when the task is limited to just three proxies of urbanisation—municipal status, monumentality and size—the work of producing a comprehensive synthesis is extremely difficult to achieve satisfactorily. The first two of these subjects, municipal status and monumentality, have a great deal of pre-existing literature relating to them, and take any single researcher several years to fully assimilate and master. The size of towns, however, aside from a few isolated studies interested in estimating ancient population levels, has only ever been examined in particular cases and no general overview has previously been attempted.[18]

The second problem hindering the development of a large-scale overview of the settlement system is the difference in data quality that exists within the various types of source material. Inscriptions, written sources and archaeological investigations all involve their own biases and lacunae. I have chosen, however,

17 Lassère 2015: 369.

18 Russell 1958; Courtois 1964; Duncan-Jones 1963; Duncan-Jones 1982, 265 n. 4; Wilson 2011. Hanson 2016 has recently attempted to provide a comprehensive survey of city-size estimates for the entire Roman empire, but his discussion is not based on a re-examination of the underlying archaeological literature, or on the accurate location and study of each site on satellite imagery.

to approach this problem in a positive manner. For example, I have been able to collect size data for just under 500 ancient North African settlement sites. The inclusion of further criteria, such as the possession of important public monuments and of juridical status, allows the number of sites included in the settlement hierarchy to be more than doubled. Before explaining how these three criteria have been used to produce a hierarchical model, I will briefly introduce how the data collection in each case has been approached.

4 Municipalisation

Including all settlements for which evidence exists of their municipal autonomy during the Roman period presents no small task, since full mastery of the subject requires not only the comparison of the writings of the ancient geographers with inscriptions on coinage, bronze tablets and on stone, but also the assimilation of previous debates concerning the numerous uncertainties regarding these data, and the considerable body of new discoveries published in articles over the last few decades.[19] For the late Republican period and early Principate the bronze coinage and Pliny the Elder's *Naturalis Historia* are the essential sources, supplemented by inscriptions, some engraved decades or even centuries after the promotion for which they provide evidence.[20] For the Imperial period the careful comparison of the epigraphic record with the literary material is necessary. In the case of Roman North Africa, the many important works of J. Gascou form the basis for our knowledge of the chartered towns.

Based on a re-examination of some of the literary, epigraphic and numismatic evidence and on a thorough survey of the scholarly literature, 218 settlements that received a Roman town charter could be identified (Fig. 9.2). Within this dataset there are 89 settlements which possessed the status of colony. Around 39 of these were veteran colonies: 30 founded in the times of Julius Caesar and Augustus, with a further nine being deducted in the period spanning the reign of Claudius to Trajan. After this, the remaining 50 were honorary grants of colonial rights to peregrine communities, a process continued piece-

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19 The bibliography on this subject is truly massive. I include here only some of the most important works of synthesis and debate: Gascou 1972; 1976; 1982c; 1982a; 1982b; 1983; 1984; 1990; 1991; 1998; 2003; 2004–2005; Jacques 1981; 1982; 1984; 1990b; 1990a; 1991; Chastagnol 1990; 1995; 1997; Shaw 1981; Aounallah and Maurin 2008; Aounallah 2010b; 2010a; Aounallah and Ben Romdhane 2015; Desanges 1972; 1990; 2003; Desanges et al. 2010; Lepelley 1979; 1981; Lassère 1977; 2015; Briand-Ponsart 2005; Teutsch 1961; 1962.

20 Shaw 1981; Teutsch 1962; Burnett, Amandry and Ripollès 1992; Ripollès et al. 2015.

meal but steadily in the second and third centuries, finally halting in the early fourth (Fig. 9.1). This is a phenomenon unparalleled in its scale in the rest of the empire. In the Hispanic provinces, for example, there is very little evidence for Latin *municipia* gaining later promotion in this way.[21]

The Latin *municipia* also display a different chronological pattern of appearance to the Iberian Peninsula, where the urban and municipalisation boom was mostly restricted to the Flavian era. The first *municipia* in North Africa were of the Roman type and also date back to the mid-first century BCE, with a final two being promoted under Claudius. The same emperor's reign probably saw the promotion of the first Latin *municipia*, and later promotions to the status of *municipium* appear to have been of this type.[22] Only a few of the 131 African Latin *municipia* in the dataset gained their statuses under the Flavians. The vast majority were promoted during the second and third centuries CE, with the practice halting by the mid-fourth.

In addition to this total, there is reason to think that a handful of other settlements also gained the status of Latin *municipium*, although the evidence is inconclusive. Some within the territory of Carthage, for example, have been argued for on the basis of analogy with other similar neighbours, while aediles dedicating monuments within the settlements of Cirtan region may or may not have held office at the mother colony. For a further 20 settlements, for which the evidence of their status is based solely on magistrates, it is not possible to distinguish between the status of *municipium* and *colonia*; in Figure 9.1 these places have been absorbed into the category of *municipia* for the purposes of analysis. Some overlap exists between the two categories. In 28 cases it is possible to see the promotion from the status of *municipium* to that of colony (5 of these being Roman *municipia*).[23] Only one of these promotions definitely occurred before the reign of Trajan and the vast majority appear to have occurred between the accession of Septimius Severus and the mid-third century CE. This sort of *cursus honorum* travelled by the North African towns may have been generally more common than we are able to prove.[24]

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21 I am grateful to my colleague Dr Pieter Houten for this realisation.

22 Chastagnol 1990: 364. Different opinions about the origin of the Latin *municipium* have been aired by Le Roux 1986, García Fernández 2001 and Espinosa Espinosa 2018.

23 *Abitina(e), Agger, Auzia, Bisica Lucana, Bulla Regia, Calama, Capsa, Cillium, Hadrumetum, Hippo Regius, Lambaesis, Lepcis Magna, Oea, Pheradi Maius, Rusuccuru, Sala, Sufetula, Thizika, Thuburbo Maius, Thubursicu Bure, Thubursicu Numidarum, Thugga, Thysdrus, Tingi, Tipasa, Utica, Vallis, Volubilis.*

24 Gascou 1972: 212. Noted with pride by Toutain 1895: 324.

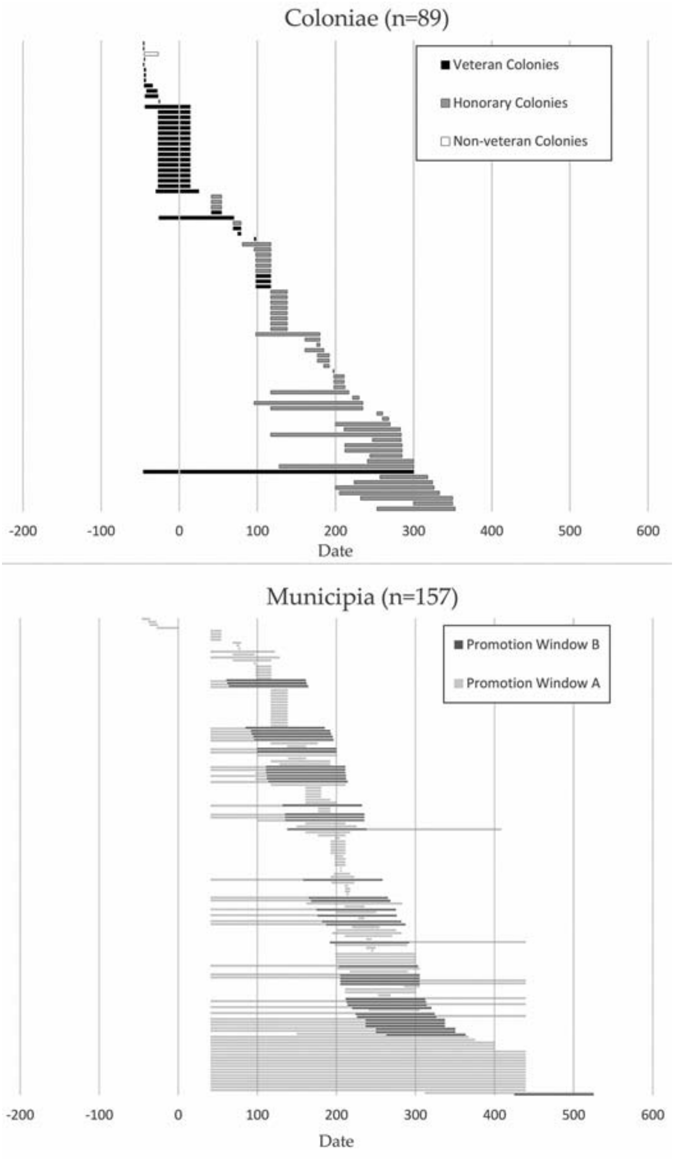

FIGURE 9.1 A chronological overview of *coloniae* and *municipia* in the North African Provinces. Top: *coloniae*. Bars indicate the *terminus post quem* and *terminus ante quem* of foundation/promotion date. Bottom: *municipia*. The first six are Roman *municipia*. Promotion window A displays the period between the *terminus post quem* and *terminus ante quem*. Promotion window B projects a 100-year period back from the *terminus ante quem* for the promotion date.

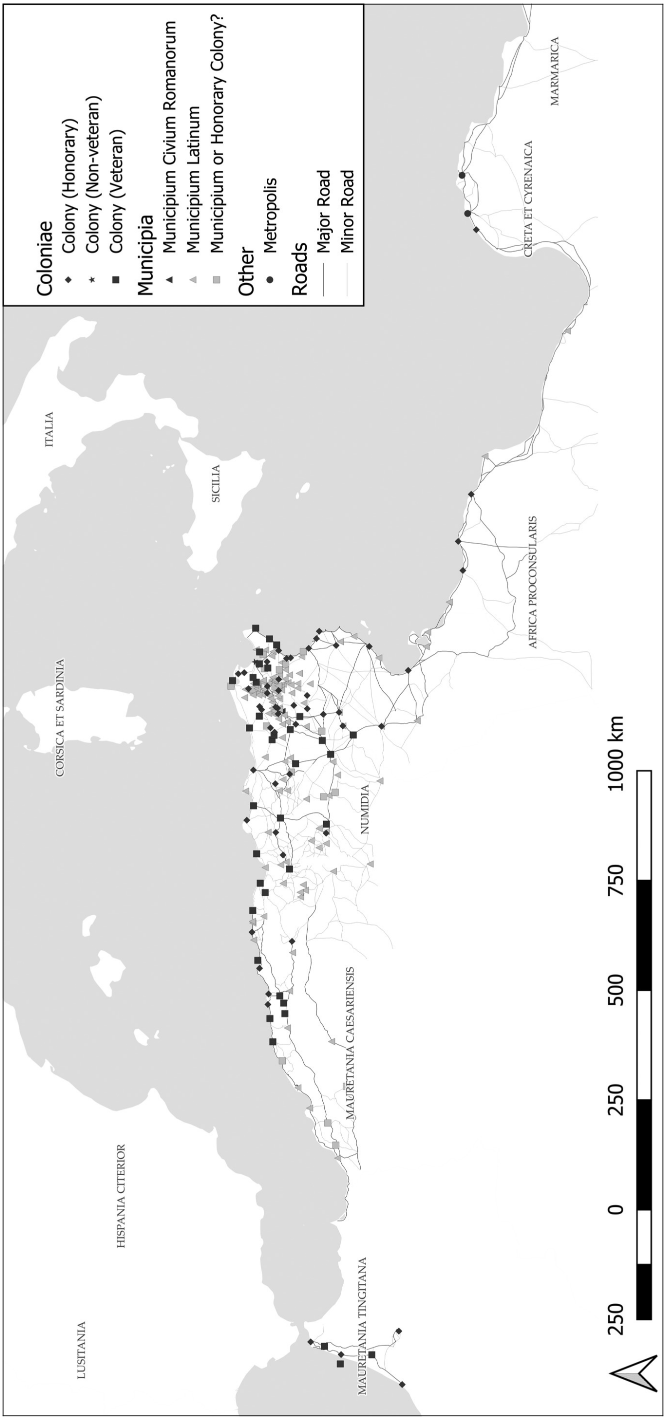

FIGURE 9.2 The chartered towns of the Roman provinces of North Africa (1st c. BCE–4th c. CE)

The transformation in North Africa is even more impressive since the majority of these communities had been left in a stipendiary condition following the destruction of Carthage and the Civil Wars of the first century BCE, grouped into large *pagi* for taxation purposes and denied the right to form municipal institutions.[25] A definitive list of the peregrine towns of North Africa, which gained a degree of municipal autonomy but appear never to have been promoted to a higher rank, is far more difficult to produce. However, a large number of self-governing communities of this type can be traced by searching the epigraphic evidence. Interpretation of the word *civitas* is problematic but evidence for local *decuriones*, town councils and indigenous magistrates makes clear the presence of a degree of autonomy. A total of 61 settlements, which do not appear to have been promoted to the rank of *municipium* or *colonia*, have provided evidence of this nature. These are mainly grouped in the urbanised zones in the hinterland of Carthage and *Cirta*, with far fewer being noted in the more arid regions, around towns like *Ammaedara* and *Sufetula*, for example.

One can observe that through the agency of elite patrons, a high proportion of autonomous *civitates* went on to secure the granting of the status of *municipium* of even *colonia* by the Late Empire.[26] This has led to the realisation that there exist hundreds of poorly investigated small sites whose archaeological remains, if examined in greater detail, might well yield similar sorts of evidence. Indeed numerous articles published over the course of the last couple of decades proclaiming the discovery of 'new towns' deal with inscriptions proving the municipal status of sites previously recorded in the old archaeological atlases. It is possible, therefore, to see the broad trend of this revolution in the juridical status and freedom given to these formerly subordinate communities, but the possibility of arriving at absolute figures escapes us at the current time.

5 Monumentality

The existence of such rich patrons in the subordinate communities of the large colonial territories of cities such as Carthage, *Sicca Veneria* and *Cirta* meant that the processes of municipalisation and monumentalisation did not follow on, one from the other, in a strict chronological order. There does, however, appear to have been a general correspondence between the communities which were

25 See the important discussion of this process in Aounallah 2010b: 29–42 and 157–160.
26 Nicols 2014.

able to build significant monuments and those which eventually were granted liberty from their mother city.

In the following analysis the inclusion of monumentality has been limited to the middle and upper portions of the settlement hierarchy. Furthermore, the focus has been narrowed to a number of key monuments closely associated with Roman-period urbanism and euergetism. The presence of spectacle buildings, such as amphitheatres, theatres and circuses, was given particular attention. Additionally, efforts were made to trace the presence of forum basilica complexes, large urban aqueducts and baths, and the presence of town walls and monumental arches. Catalogues containing many of the known archaeological examples from North Africa have been produced for a number of these categories of monument by previous researchers. For example, a reasonably thorough study has been compiled by F. Sear for theatres and by D.L. Bomgardner for amphitheatres.[27] Other useful works include J. Humphrey's monograph on circuses and Y. Thébert's book on bath complexes.[28] In a number of cases the lists provided by these researchers have been extended by completing a thorough trawl of the archaeological atlases available for Algeria and Tunisia and of the publications produced more recently by regional survey projects.[29]

Such catalogues provide an extremely useful base from which to explore patterns of monumentality in Roman North Africa. The dating for such features, however, is often more rough than one might expect. Amphitheatres are a prime example of this. The large scale of their remains makes the discovery of datable inscriptions difficult, and few have been excavated to a standard by which their construction date can be narrowed down by analysis of the stratigraphy. The doctoral research of C. Blonce on the monumental arches of North Africa provides a strong contrast, however, with much tighter chronological precision for the construction of such monuments provided by the readily discoverable dedicatory inscriptions.[30] No single monograph or catalogue is available for the wall circuits of towns in Roman North Africa. This remains an area in need of much more detailed study. In Mauretania Caesariensis a town without a wall circuit would be exceptional, but in the Tell, despite possessing monumental gates, many towns appear never to have built themselves a surrounding wall.[31] Important articles do exist on this subject by

27 Sear 2006; Bomgardner 2000.
28 Humphrey 1986; Thébert 2003.
29 Babelon et al. 1892–1913; Gsell 1902–1911; Cagnat and Merlin 1914–1932.
30 Blonce 2008.
31 Peyras 1991: 198–201.

C. Daniels and P. Leveau, which add insights to the study of Byzantine defences conducted by Pringle.[32]

The quantification of datable inscriptions has tended to dominate the discussion on the subject of monumentality, supporting the idea of an urban boom in North Africa during the second and early third centuries CE. Aside from being used as a source of information about dating, inscriptions reveal contrasting amounts spent by magistrates taking office (*summae honorariae*) as well as the costs of certain public building projects.[33] The use of a geographical information system has allowed the mapping of architectural phenomena alongside information concerning size and municipal status.

6 Size

A starting point for the collection of data on settlement size, beyond the catalogue of places with evidence for self-government, was provided by the 900 or so places listed as 'settlements' within the *Barrington Atlas/Pleiades* dataset.[34] This was then supplemented by available publications concerning archaeological surveys and excavations. For the better documented sites, detailed plans and archaeological reports are available. Often, however, sites have been built over by modern towns and villages and we possess only unreliable estimates of their size given in antiquarian sources. In fact, for the vast majority of the sites no detailed assessment of their size has previously been attempted. In order to substantially increase the extent of the dataset I have often pushed the available sources to their limits. This has involved estimating the maximum possible size of a built-up area based on the locations of known remains, or of surrounding necropoleis, and commonly making use of satellite imagery to identify the extent of spreads of rubble or soil stains. In numerous cases it will be possible to improve the size estimates I have made considerably, especially using the modern techniques of archaeological and geophysical survey. The latest geophysical results from *Simitthus* demonstrate this point nicely, since they have increased the estimate of the built-up area of the town by several hectares.[35] What I hope results from this extremely inclusive approach to data collection is the ability to begin to see some of the broader patterns within the fabric of the settlement hierarchy of Roman North Africa with much greater clarity.

32 Daniels 1983; Leveau 1985; Pringle 1981.
33 Duncan-Jones 1982: 63–119; Duncan-Jones 2004.
34 Talbert 2000.
35 Von Rummel, Broisch and Schöne 2013.

The use of satellite imagery of course has two necessary prerequisites. The first is that the researcher must know the exact coordinates of the site in question. The second is that the site must be in a sufficient state of preservation for the extent of its remains to be visible on the imagery. In order to locate sites accurately enough for this purpose, it was essential to consult the maps that were provided with the archaeological atlases compiled in the late nineteenth and early twentieth centuries.[36] For this purpose the scales of 1:50,000 and 1:100,000 used by the Tunisian atlases are far more usable than that of 1:200,000 used for Algeria.

The atlases are especially important for the information they contain about the huge number of ancient settlements that have been overbuilt by expanding modern towns and villages, or which have disappeared under intensive agricultural regimes over the last century. Hundreds of sites were used as quarries for building stone in the colonial period, and the significant growth of the urban population since 1950 has resulted in hundreds more disappearing under modern constructions.[37] North Africa still possesses some of the most well-preserved and accessible remains of the settlements of the ancient world, but political instability has led to this archaeological resource being chronically under-researched. Ongoing demands for increased food production, residential housing, aggregate extraction and improvements to infrastructure mean that the threats to the preservation of this resource have never been more acute. Indeed, even some of the largest and most well-preserved ancient town sites are suffering considerable damage from urban encroachment. In some cases it has been possible to recover an estimate for the size of settlements now buried, built over, or covered in vegetation, by consulting areas of hatching on the maps provided by the *Atlas archéologique de la Tunisie*. While the atlases are imperfect, outdated and incomplete, for many sites they remain the best starting point for gathering information and accessing earlier bibliographies. The coverage of the atlases, however, only includes the more northerly parts of Algeria and Tunisia, those areas that were most urbanised in ancient times, and we possess no such record for Libya and Morocco.

Figure 9.3 attempts to give a rough guide to the issue of overbuilding, displaying the condition of the top five categories of my settlement classification. Of the 445 sites displayed 32% have been heavily overbuilt, with another 23% being partially overbuilt. The lack of coastal plain along the northern coastlines of Algeria and Tunisia has led to ancient sites being heavily affected by

36 I am grateful to Dr. Paul Scheding for drawing the work completed by the Al-Idrisi project in digitising these maps to my attention.

37 Greenhalgh 2012; 2014.

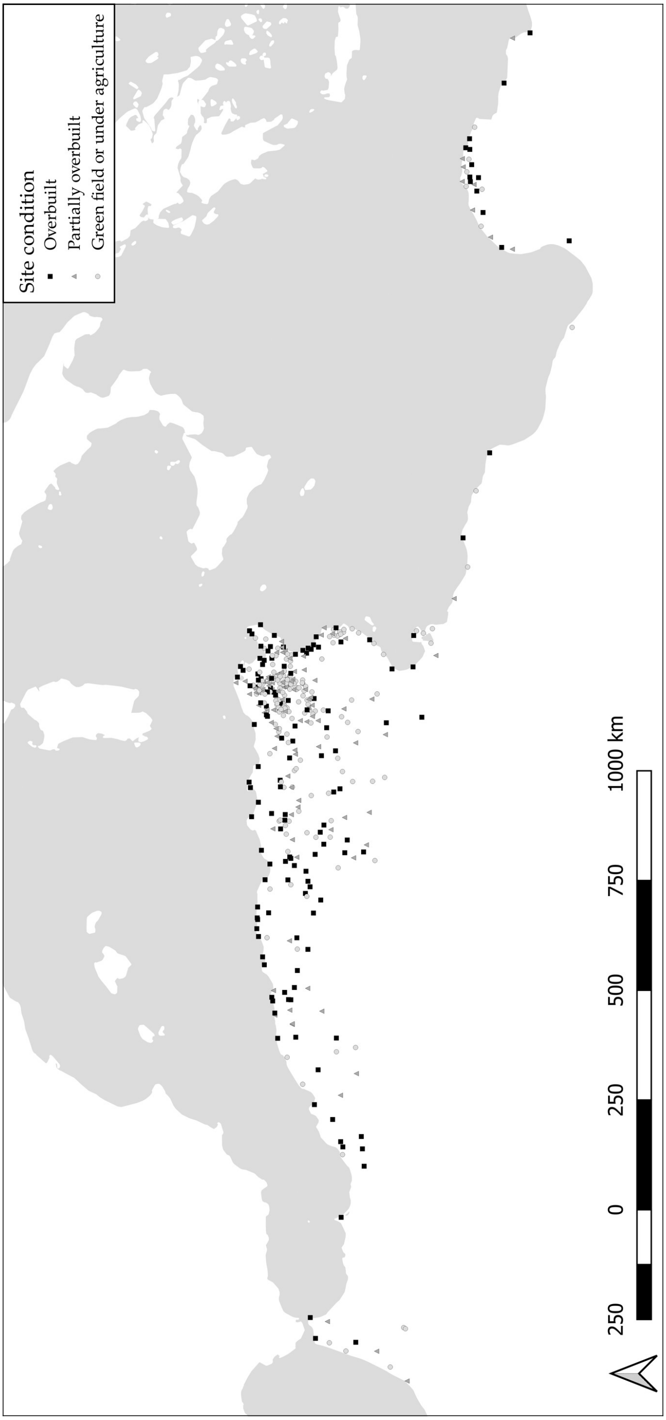

FIGURE 9.3 The state of preservation of sites in classes 1–5 (n = 445)

modern construction. Sadly, in Libya the numerous uniquely well-preserved remains of ancient coastal towns are also starting to suffer encroachment from the adjacent settlements, with the current political situation making it difficult for the Department of Antiquities to mitigate during new development works around even famous sites such as *Sabratha*, *Ptolemais* and *Apollonia*. Inland sites have suffered considerable overbuilding in western Algeria and on the Cyrenaican plateau. The archaeological landscape around the ancient town of *Cyrene*, for example, is disappearing at a particularly alarming rate.[38] One of the most shocking examples is the important 6 ha site of *Messa*, 22 km to the west of *Cyrene*, the entirety of which was bulldozed and built over during the course of 2015 and 2016.

A considerable 38% of the top five classes of sites have not been built on and remain accessible for archaeological investigation. The surface remains of many of these have, however, been heavily damaged or obscured by modern agriculture or arboriculture. Far from all of them have a clearly visible form and extent on freely available satellite imagery. Nonetheless, in many cases it was possible to achieve an estimate of the size of a site based on satellite remote sensing.

It should be noted that our best opportunities for analysing the full settlement pattern from the largest sites down to the smallest is offered by more recent archaeological field survey. By far the most significant contribution to extensive archaeological survey has been made by the work undertaken by the *Institut National du Patrimoine* (INP). Much of this has been done within the framework of a project called '*La carte nationale des sites archéologiques et des monuments historiques*', which was begun in 1992 in order to build on the catalogue of sites provided by the atlas and to update it for the current purposes of research and heritage management. Sixteen edited survey reports published between 1998 and 2005,[39] whose data was collected before the year 2000, used the Lambert coordinate system for north and south Tunisia (EPSG: 22391 and 22392).[40] In the year 2000 the process of producing a digital sites and monuments database for Tunisia was begun through the IPAMED project (*Inventaire*

38 Bennett and Abdulkariem 2014.

39 Annabi 1998; Ben Baaziz 1998; Ben Younes 1998; Ghalia 1998; Mrabet 1998; Annabi 2000b; 2000a; Ben Baaziz 2000b; 2000a; Mrabet 2000a; 2000b; Maurin 2003; Ghalia 2004; Ben Baaziz 2005a; 2005b; Sow 2005.

40 The EPSG Geodetic Parameter Dataset is a structured dataset of Coordinate Reference Systems and Coordinate Transformations, accessible through this online registry (www.epsg-registry.org), or as downloadable zip files through IOGP's EPSG home page at www.epsg.org.

du Patrimoine Mediterranéen). From this time onward, survey data began to be collected with handheld GPS units using UTM coordinates (UTM zone 32N, EPSG: 22332),[41] and a uniform system for cataloguing sites and monuments in a digital format was adopted.[42] A further five edited survey reports resulting from this new phase of work were published in 2009.[43] Since many of the gazetteer entries in the publications of the *Carte* include estimates of site size, one can get a much better view of the overall shape of the settlement hierarchy in regions covered by this survey programme.

7 Modelling the Roman-Period Settlement Hierarchy

This section will deal with how these sources of data have been used to stream more than 1,000 sites into eight classes of a settlement hierarchy (summarised in Table 9.1 below). The purpose of the categorisation is to be able to discuss regional differences in the shape of the hierarchy in the following section. The ten Class 1 settlements possessed a built-up area of at least 100 ha with many public monuments. With the exception of *Meninx*, it is confirmed that they attained the status of *municipium* or *colonia*. The 19 Class 2 settlements fell in the size bracket of 50–99.9 ha, possessed public monuments and, with one exception (*Acholla*), are known to have attained the status of *municipium* or *colonia*. Sites between 20 and 49.9 ha that reached the rank of *municipium* or *colonia* were deemed to be of Class 3a. The dataset contains 71 such places. Good examples of this category include *Sufetula*, *Thugga*, *Madauros* and *Volubilis*. A further three sites, *Sertei*, *Obba* and *Vasampus* appear to have been between 50 and 99.9 ha, but have yielded no evidence of holding such a status (3b). Class 4 is also made up of two sub-groups: 4a contains 122 sites under 20 ha, which attained the status of *colonia* or *municipium*. Good examples are *Seressi*, *Uchi Maius*, *Rapidum* and *Thibilis*. Class 4b includes sites covering 20–49.9 ha, which apparently did not gain a Roman charter. A handful of these, such as *Vazari* and *Cuttilula*, have provided evidence that they may

41 The IPAMED project, jointly run by the INP, the Centro Ricerche Archeologiche e Scavi di Torino (Italy) and the Centre Nationale de Recherche Scientifique (France), ran from 1999 to 2002. The programme uses 1:25,000 scale maps.

42 Institut National du Patrimoine and Euromed Heritage 2004.

43 Ben Baaziz 2009a; 2009b; 2009c; 2009d; Peyras 2009. Two further reports were published in 2017 (Mrabet 2016a; 2016b), but I have unfortunately not been able to include the data they contain.

TABLE 9.1 Explanation of the settlement classification

Class	Size	Public monuments	Status	Frequency
1a	≥160 ha	Mandatory	Col./Mun.	2
1b	100–159.9 ha	Mandatory	Col./Mun.	5
1c	100–159.9 ha	Mandatory	Not Mandatory (*Meninx*)	3
2	50–99.9 ha	Mandatory	Col./Mun. + Acholla (*oppidum liberum*)	19
3a	20–49.9 ha	Mandatory	Col./Mun.	71
3b	50–99.9 ha	Not Mandatory	Absent/Unknown	3
4a	<20 ha/ unknown	Mandatory	Col./Mun.	122
4b	20–49.9 ha	Not Mandatory	Subordinate settlement or possible self-governing community	49
5a	<20 ha/ unknown	Absent	Evidence of self-government, in some cases perhaps the intervention of magistrates from a nearby governing town	94
5b	<20 ha/ unknown	Significant (e.g. spectacle building)	Unknown/Absent	10
5c	<20 ha/ unknown	Unknown/Significant monuments buildings	Unknown/Uncertain evidence	67
6	10–19.9 ha	Unknown/Absent	Unknown/Absent	203
7	5–9.9 ha	Unknown/Absent	Unknown/Absent	190
8	1–4.9 ha	Unknown/Absent	Unknown/Absent	210
Total:				1048

have enjoyed a degree of self-government, but the vast majority have yielded no strong proof and may well have remained subordinate to other nearby cities.

Class 5 consists of three groups. The first group (5a) includes centres under 20 ha, which have yielded evidence to indicate that they possessed municipal institutions. Many of these have inscriptions referring to a *civitas*, *res publica*, a town council, or its local magistrates or *decuriones*. The second group (5b) contains places of unknown size and status but which constructed a spectacle building or other important public monuments. The final group (5c) contains settlements for which our evidence is generally poor, but which have evidence in some form to indicate a degree of importance above a low density agricul-

tural village. They might be described in the archaeological atlases as a 'small town' or as 'extensive ruins', or have possessed some substantial monument, with little further supporting information being available.[44]

At Class 6 the lower part of the settlement hierarchy, which may traditionally be regarded as rural, is reached. It contains nucleated places of around 10 ha in size and more sprawling settlements that, although larger, present the character of a low-density agricultural settlement. We know from archaeological surveys which regularly tend to pick up previously unrecorded settlements of this size, that Class 6 is unfortunately a heavily underpopulated category. The same is true of Classes 7 (sites 5–9.9 ha) and 8 (sites <5 ha); our geographical knowledge of the distribution of such sites is incomplete and hugely uneven. The work of adding Class 7 and Class 8 sites from the published survey reports to the dataset has not been systematically undertaken. At this level of the hierarchy thousands of archaeological sites are yet to be recorded in North Africa and many have already disappeared below expanding modern settlement or have been obscured by intensive agricultural regimes. At present the best we can manage is to look at smaller regions recently covered by both the extensive and intensive archaeological survey projects of the type mentioned above. Additionally, there exist hundreds of toponyms recorded in written sources, listing road stations, harbours, villages, and so on, which are yet to be securely associated with groups of archaeological remains. Add to this the problems of different spellings contained in the sources surviving from across the ages, and one begins to appreciate the scale of the task at hand.

Before going on to analyse regional patterns within the hierarchy it is worth highlighting one or two general points of interest. Figure 9.4 shows a rank-size graph with the points on the graph given a symbology that represents the known municipal status of settlements. As one perhaps might have expected, notwithstanding a degree of overlap, the towns with Roman citizenship tended to be larger, clustering on the left hand side of the graph. Peregrine sites, some of which were promoted to the rank of *municipium*, tended to be smaller, clustering in the centre and right of the graph. Representing the data in this way underlines the fact that it was highly atypical for settlements to grow to a size exceeding 40 ha. It is worth reflecting on the fact that many of the most well-known Roman-period towns of North Africa, *Lepcis Magna*, *Thamugadi*, *Uthina*, for example, sat towards the very top of the settlement hierarchy in terms of their size. The few communities which reached this size in North

44 The evidence for the settlements of Cyrenaica is of a somewhat different character. I hope to treat this subject in more detail in a future article written with A. Buzaian.

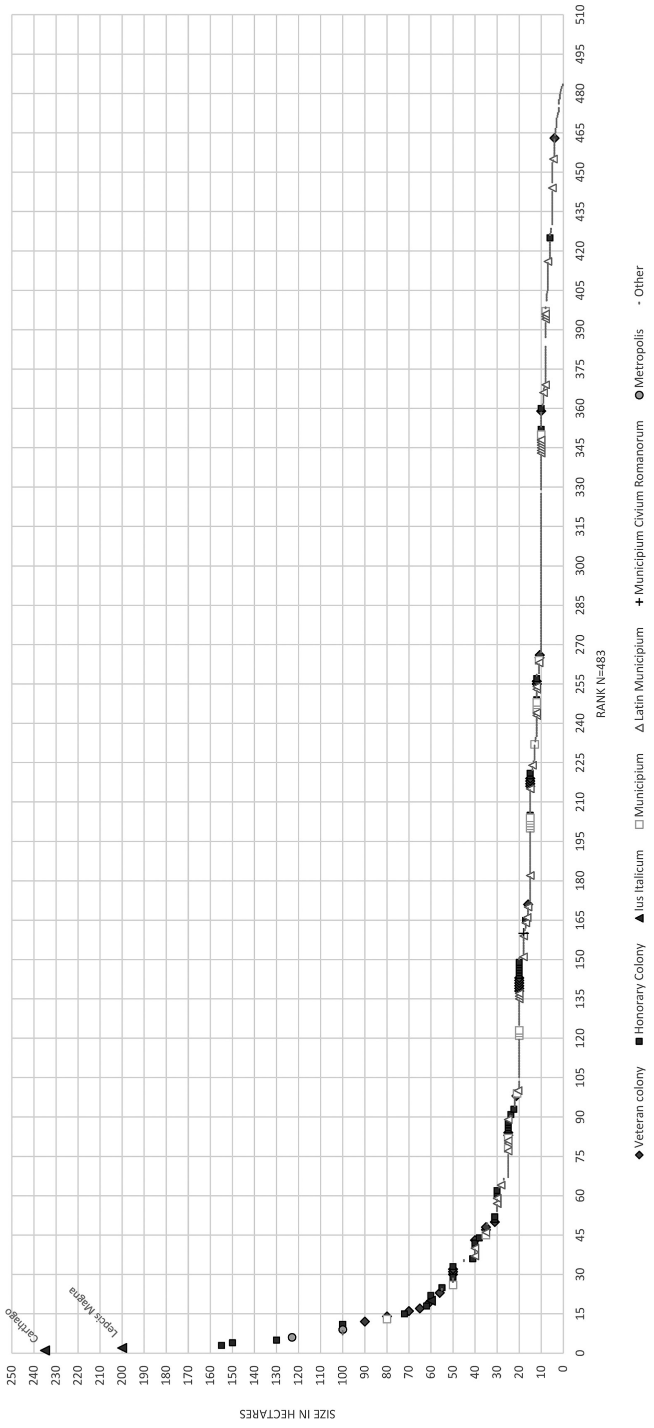

FIGURE 9.4 The correlation between settlement size and municipal status

Africa would have expected to be able to gain municipal status, most of them attaining the rank of colony.

The graph also demonstrates that not all communities which gained municipal status or a degree of monumentality were large. A considerable number of the towns with the status of *colonia* or *municipium* also filled the range between 10 ha and 30 ha, and some appear even to have been below 10 ha in size. Some of these sites were early colonies that became less strategically important over time, others were long-standing agricultural communities which eventually managed to successfully petition for municipal promotion. A significant increase in the number of Latin *municipia* in the hinterland of Carthage is particularly visible during the Severan dynasty, a phenomenon discussed further in the next section.

Finally, the presence or absence of a recorded spectacle building (an amphitheatre, theatre, circus or odeon) can also be compared to the possession of a Roman municipal charter. Within classes 1–5, 33% of the chartered towns possessed one or more of these monuments, compared to 5% of the non-chartered settlements.

8 Regional Patterns within the Settlement Hierarchy

In the top two classes of the hierarchy there are just twenty-nine sites, ten of Class 1 and nineteen of Class 2. The archaeological condition of these settlements ranges from the spectacularly well preserved to the completely overbuilt, and for many it is difficult to estimate their true ancient size accurately. Eight of the ten Class 1 sites were located on the coast, with the other two situated within 30 km of it (Fig. 9.5). Beyond this, one can note that they were concentrated along the more open eastern seaboard of Africa Proconsularis. Far fewer large cities were able to develop along the more rugged and closed north-facing coastline of the Maghreb. Here east-west oriented mountain chains provided few locations with a sizeable enough coastal plain to support the growth of a large city. In those cases where it was possible for settlements to grow to a larger size, prospects were limited by the ruggedness of the landscape in the immediate coastal hinterland, which in turn made communication and transport links with the productive grain lands of the interior difficult. To the far west the concept of the 'Circle of the Straits' has long encapsulated the view that the Atlantic coastlines of the Iberian Peninsula and Morocco were more conducive to intercontinental communication than the Mediterranean shorelines within the Pillars of Hercules. Indeed, the inward looking economy of the provinces of Numidia and Mauretania Caesariensis was highlighted long ago in

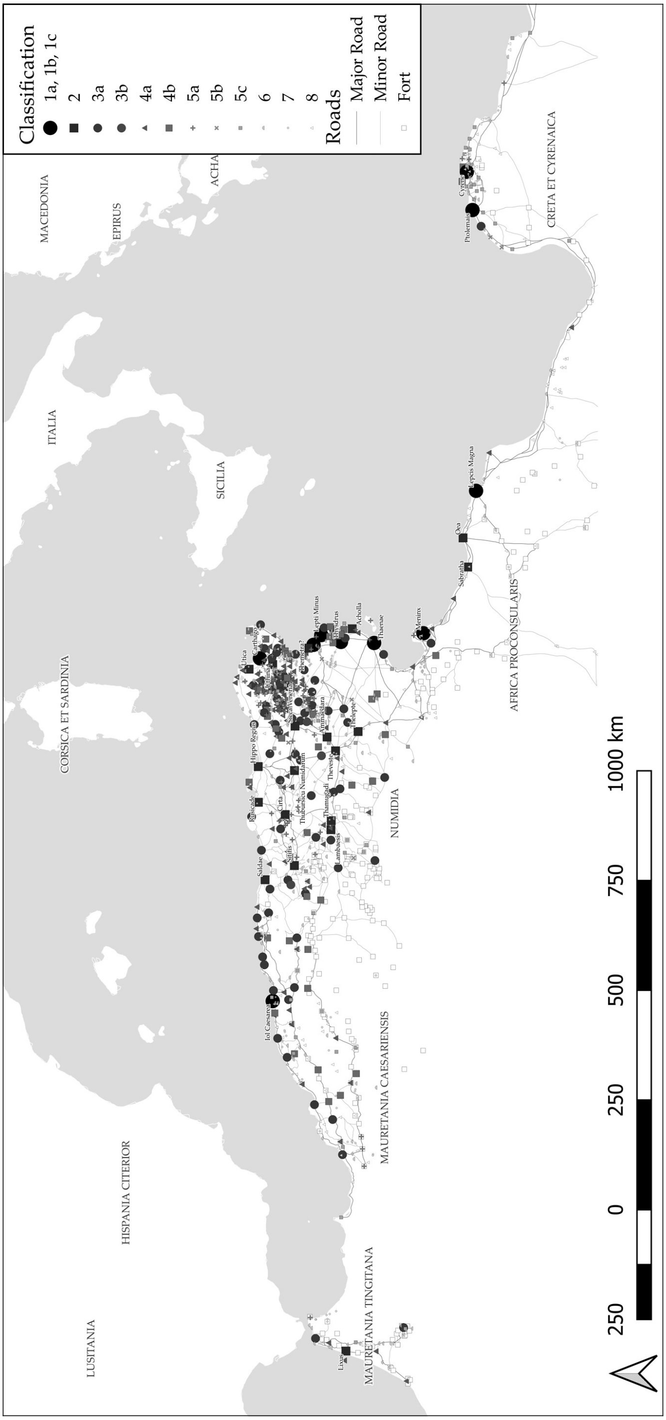

FIGURE 9.5 Map showing settlement classes 1–8. Classes 1 and 2 are labelled.

a pioneering article by A.N. Sherwin-White.[45] More recently, the pattern of the geographical relief in North Africa has led B. Shaw to compare the Maghreb's coastal belt to the shell of a crustacean, which to varying degrees divided the interior from the Mediterranean coastline all the way from the Tingitane Peninsula in the west to Lake Bizerte in the east (Fig. 9.6). This made the towns of *Utica* and Carthage, sitting at the mouth of the broad Bagradas Valley, all the more important for the role they were able to play in connecting the mineral and agricultural resources of these wealthy regions with the opportunities of Mediterranean trade beyond.

Low levels of precipitation could also detract from the benefits of a coastal position. Today Saharan conditions prevail along much of the coastline between *Thaenae* and the Nile delta. This inhospitable environment is interrupted only at certain points, where isolated micro-regions favourable to agriculture can be thought of as analogous to Mediterranean islands.[46] The fertile plateau of Cyrenaica, rising to 600 m above sea level and above the 400 mm isohyet, is one such example. Two others are Tripolitania, where the cities of *Sabratha*, *Oea* and *Lepcis Magna* were located, and a smaller region including the Isle of Djerba and part of the nearby mainland. While six of the Class 1 sites were located in regions with less than 400 mm average per annum rainfall, where the potential to harness run-off waters resulting from precipitation was dictated largely by the geographical relief,[47] it is clear that such large settlements needed to be connected to hinterlands which fell above the 200 mm per annum isohyet. The proximity of *Lepcis Magna* (c. 200 ha) to the hilly region of the inland djebel that was important for olive oil production, a substantial portion of which was contained within its huge territory, helps to explain its great size and importance. Elsewhere vast stretches of coastline which fell below the 200 mm isohyet, around the Greater Syrtes, for example, were characterised by an absence of large towns in antiquity.

Similar factors influenced the development of the Class 2 sites, nine of which were situated on the coast, ten further inland. The inland sites were for the most part located at strategically important places along east-west lines of communication. Those located furthest into the interior—*Lambaesis*, *Thamugadi*, *Theveste* and *Thelepte*—had obvious associations with the Roman army and were linked by an important military trunk road running in an east-west alignment north of the Aurès and constructed during the early second century CE. *Ammaedara* was once the location of *Legio III* and was also located on the most

45 Sherwin-White 1944: 6.

46 Shaw 2003: 96–99.

47 Shaw 1984: 135–142.

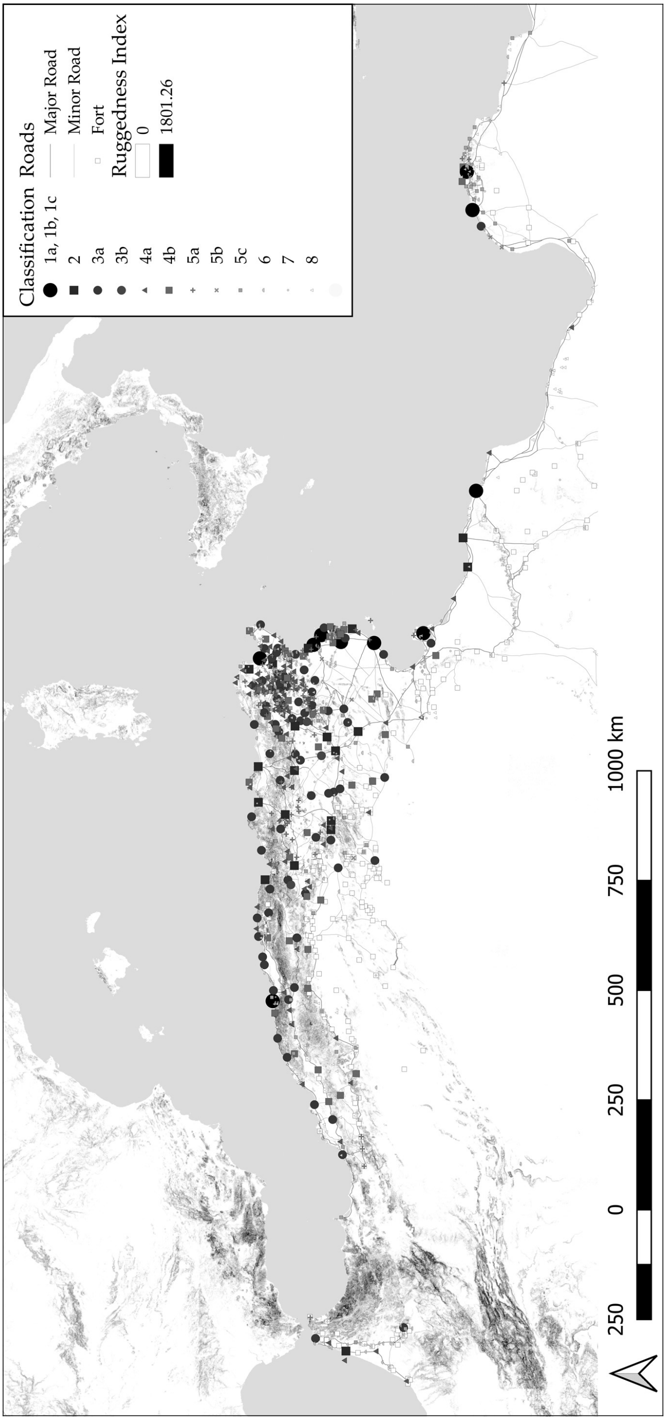

FIGURE 9.6 The spatial patterning of the Roman-period settlement hierarchy compared to the ruggedness of terrain
GTOPO30 ELEVATION DATA OBTAINED FROM HTTPS://EARTHEXPLORER.USGS.GOV/

strategically important road linking Carthage to *Theveste*. *Sicca Veneria* occupied a position along this same route. Of the other inland sites *Uthina* (72 ha) was a veteran colony of *Legio XIII* founded in Caesarian/Augustan times in a favourable location beside the lower wadi Miliane, Tunisia's second perennial river which, like the Medjerda, issues into the Gulf of Tunis. *Thubursicu Numidarum* (60 ha) was located at the origin of the Medjerda River. *Utica* (60 ha), which had been the *de facto* provincial capital before Carthage was refounded, was located at its mouth. *Cirta*, important before Roman times had been integrated early on by P. Sittius.[48] *Sitifis*, in an inland region important for its agricultural production, received veteran settlers during the reign of Nerva.[49]

As well as occupying favourable locations, there is little doubt that Class 1 and 2 sites controlled large territories. The overwhelming majority of town populations in antiquity were fed by food produced within their immediate hinterlands. Coastal towns could secure supplies during shortages with greater reliability and so tended to be able to grow to a larger size. The late Sir Moses Finley once forcefully argued that "towns could not outgrow the food production of their immediate hinterlands unless they had direct access to waterways".[50] Towns like Carthage and *Lepcis Magna*, the two largest in North Africa, could also draw on truly massive territories, and only in exceptional circumstances, following several years of bad harvests, would have had to rely substantially on imports. In the case of *Lepcis Magna*, boundary stones indicate that its territory was in the region of 3,500 km^2. Carthage's territory would have been larger still, perhaps two or three times the size. Inland, towns were generally smaller, but naturally the largest of these successfully controlled a large territory, probably in the region of 2,000–3,000 km^2 for Class 2 towns. The distances between such large towns were, therefore, considerable, often in the region of 50–100 km.[51]

A sharp contrast to the coastal distribution of Class 1 towns and the inland distribution of Class 2 settlements centred on the province of Numidia, is provided by the hinterland of the city of Carthage. The heart of Roman North Africa's urbanism, and no doubt by far its greatest concentration of population, is represented by an ovoid-shaped region within northern Africa Proconsularis. This covered an area of approximately 25,000 km^2 including the Tell and the Dorsal and sandwiched in between the 400 mm per annum isohyet to the south and the rugged hills of the coastal region to the north. Previous discussions of this region have marvelled at its dense occupation, containing somewhere in

48 Shaw 1981: 440–442.
49 Février 1989: 114–115.
50 Finley 1999: 126.
51 Toutain 1895: 317–318.

the region of 200 Roman towns.[52] The settlement hierarchy and the spatial distribution of sites within it call for further analysis.

At the top of the hierarchy of this region sat the 235 ha Carthage, able to draw on the surpluses produced by its huge agricultural hinterland which contained many of these smaller settlements. Only four Class 2 sites can be counted in this zone, and these were peripheral to the main concentration of towns. To the east, *Utica* and *Uthina*, as already mentioned, were positioned at the heads of two major wadies, while *Themetra* was located on the coast to the south-west and *Sicca Veneria* positioned far inland to the west. Drawing the border lines of this region somewhat arbitrarily, one can count a further 31 Class 3 sites, 91 Class 4 sites and 73 of Class 5. Thus, it becomes apparent that if the figure of 200 'towns' is to be reached, the definition of what constituted a town during this period must be an inclusive one. Approximately 90 % of the 'towns' in this, one of the most densely 'urbanised' regions of the Roman Empire, were probably smaller than 30 ha. The inter-site distances, sometimes as little as 3 or 4 km, indicate that the territories of these towns would have been very small in comparison to the Class 1 and 2 sites, in the region of 70–150 km^2. Despite the humble nature of many of these settlements, the level of concentration is impressive in the context of the North African provinces. A total of only 445 sites classed 1–5 was recorded for the entire study area, indicating that this part of northern Tunisia perhaps contained around 45 % of North Africa's town-like agglomerations.

When one examines the chronological development of municipal status in this area, it is quite striking how the communities of this region were gradually encircled by Roman colonies. First came *Uthina* and *Thuburbo Minus* after the Battle of *Thapsus*, controlling the lower 20 km stretches of the wadi Miliane and wadi Medjerda. By the end of the reign of Augustus this highly populated region had been entirely surrounded by Roman colonies: *Thuburnica*, *Simitthus*, *Sicca Veneria* and *Assuras* to the west, *Neapolis*, *Curubis*, *Clupea*, *Carpis* and *Maxula* on Cap Bon to the east, and *Thabraca* and *Hippo Diarrhytus* on the northern coast. What is more interesting is how slow the pace of municipal promotion in this part of North Africa was for the following two centuries. In this region Latin *municipia* appear east of the *fossa regia* only from the reign of Hadrian onwards, and west of it (the region of numerous imperial estates) only from the reign of Septimius Severus. Part of the explanation for the lack of municipal promotion here is that the communities of this region were located within the territory of Carthage or within a landscape of large imperial estates.

52 Picard 1990: 25–39.

Regardless of the developing urbanism in this region, these were conquered peoples, and treated so by Rome. Many of the communities of Roman citizens living within the subordinate centres of Carthage's huge territory were, however, viewed as members of the mother colony. Indeed, there is epigraphic evidence for the members of the municipal aristocracies of towns like *Thugga* (25 ha) entering the Carthaginian *ordo* and paying for the construction of public monuments in their home towns.[53] The recent doctoral research of Paul Scheding has shown how the spatial and architectural organisation of these towns differed from other autonomous towns in North Africa. Since there was little need to cater for a rural population visiting from a large surrounding territory, processional avenues, grand plazas and forum basilicas were mostly absent. Public monuments tended to project their most luxurious features towards interior, rather than exterior, spaces, and were often built by the elite on privately owned land.

The survey work conducted for the map sheet of Medjez el Bab by the *Carte archéologique* and around Dougga by the team of M. de Vos provides the opportunity to see something closer to the full richness of the former settlement hierarchy in certain case-study zones within the *pertica Carthaginiensium*. Here, and in this part of northern Tunisia more generally, a single survey area of the *Atlas* measuring roughly 660 km^2 will typically contain at least one Class 3 settlement as well as numerous Class 4 and Class 5 sites. In this region it is clear that the middle and upper parts of the settlement hierarchy were accompanied by a high quantity of smaller hamlets and farms. Further into the interior below the 400 mm per annum rainfall isohyet, in the western Dorsal and High Steppe, by contrast, we can see that in survey zones around the towns of *Ammaedara*, *Thala*, *Sufetula* or *Cillium*, for example, it was not typical for numerous other small towns and large villages to exist. The agricultural hinterlands of these towns were, however, equally well populated with rural farms and small hamlets. A similar gap in the hierarchy appears to have existed around some large towns like *Cirta*, encircled by numerous subordinate *castella*, a few of which later achieved municipal status.

Thanks to further survey work by the Institut National du Patrimoine in the Tunisian Sahel, in a zone stretching approximately 30 km inland west and south of Mahdia, we can see yet another pattern. As already noted, *Thysdrus* and a number of coastal settlements in this region can be categorised as Class 1 settlements. While the agricultural hinterlands of these towns were not particularly conducive to the production of cereals, they were able to develop into large coastal emporia precisely because certain locations along the coast, which

53 Described brilliantly by Santangelo 2008.

were not blocked by the existence of inland sebkhas, were well-connected with the interior through the transport network. Acting as entrepôts for the seasonal harvests of olive oil from the High Steppe, they also received fine ceramic vessels, hides and textiles for export. Archaeological and epigraphic evidence for large storage facilities indicate that, with easy access to trade from the Mediterranean, they could import and store grain in case of bad years.[54] Evidence of fish-salting vats and depictions on mosaics prove that they could also exploit the fruits of the sea. Classes 2, 3 and 4a appear not to have been common here, but numerous large villages developed to a stage of significant proto-urbanism in the shadow of *Thysdrus* and the great coastal emporia, with significant numbers of Class 4b and 5 sites, supported by numerous Class 6 villages.[55]

The conditions necessary for the emergence of any of these types of urbanism can perhaps best be revealed by an examination of the areas in which town-like settlements were wholly, or mostly, absent. In vast areas of North Africa a reasonably dense network of settlement classes 6–8 was accompanied by a total absence of what we might today recognise as town life (represented by classes 1–5). In each case one does not have to look far beyond the basic determining factors of geography and climate to find an explanation for this absence. Such landscapes were either too cold or too hot, or received too erratic, or too little, rainfall for the existence of cereal agriculture on a scale large enough to support a deep hierarchy of numerous towns. Figure 9.7 displays the model settlement hierarchy in relation to modern zones of average per annum rainfall. Due to the high degree of inter-annual fluctuation in rainfall in the semi-arid and arid regions, it needs to be read with some degree of caution. The fact that deeper, more balanced settlement hierarchies developed above the 400 mm per annum isohyet, where agriculture could be practised without the intensive use of irrigation or water capture techniques, is however an unescapable fact.[56] The density of ancient town-like settlement (Classes 1–5) steadily decreased south of the 400 mm rainfall isohyet, with a sharp decline below 200 mm per annum average. Some of the wetter regions, such as the Tellian Atlas ranges close to the coastline, were too rugged, or too densely forested, for large settlements to easily develop there.[57] By contrast, some of the dryer regions, such as the High Plains of western Algeria, were mostly too flat to allow for the easy harnessing of run-off water. Such regions remained important for the seasonal

54 See the group of papers published on this issue in *AntAfr* 43: 165–264.
55 Younes 2009; 2012.
56 Daniels 1987: 232–235.
57 Lawless 1972: 128.

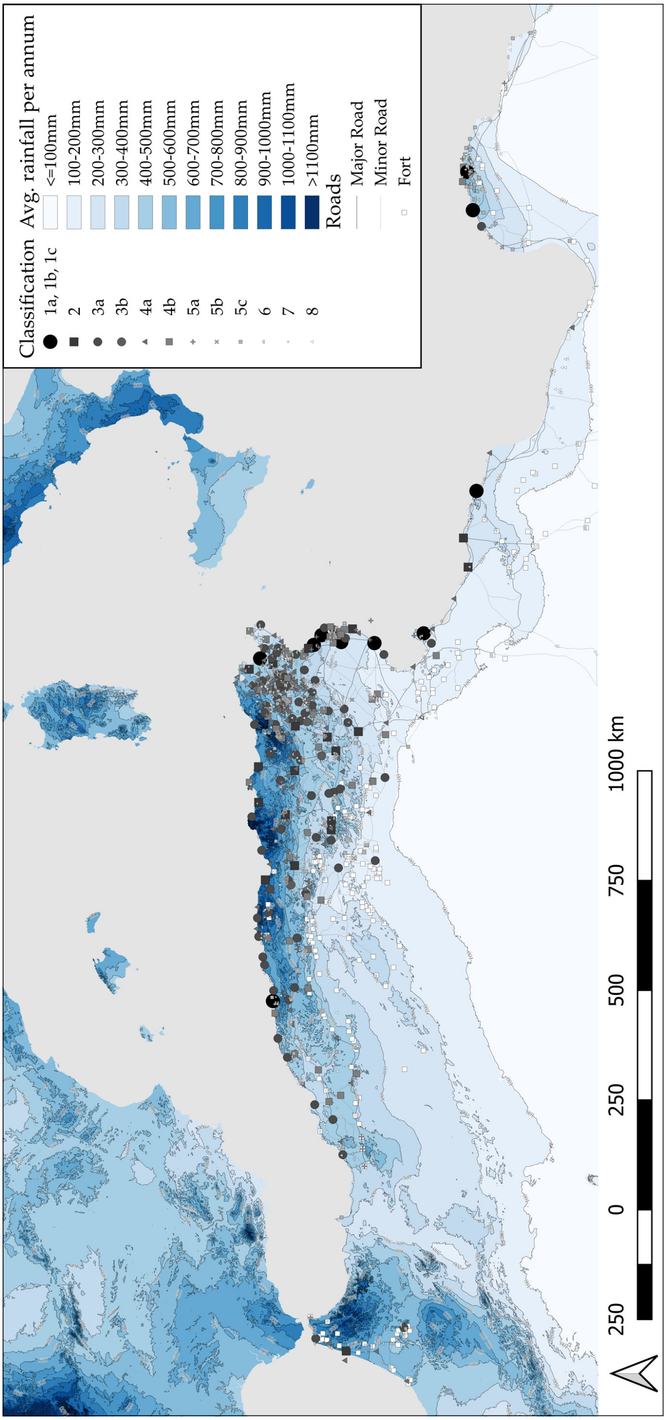

FIGURE 9.7 The spatial patterning of the Roman-period settlement hierarchy and modern per annum rainfall zones

DATA FROM WORLDCLIM.ORG

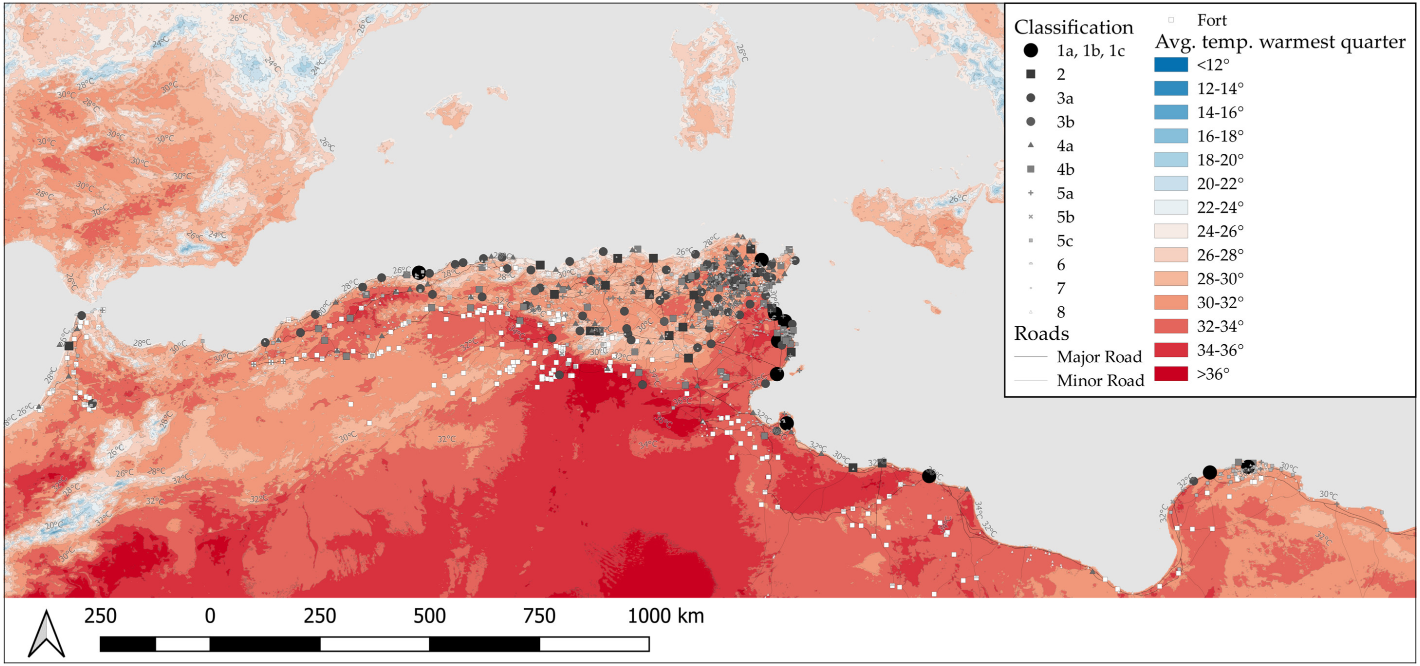

FIGURE 9.8 The spatial patterning of the Roman-period settlement hierarchy compared to zones of modern average temperature during the warmest quarter of the year
DATA FROM WORLDCLIM.ORG

grazing of livestock, integrated into the north-south movements of communities of semi-pastoralists.[58]

A semi-pastoral way of life also held sway in other areas due to extremes of temperature. Scientists now know that damage to the world's major grain crops occurs when temperatures climb above 30°C during flowering.[59] This was probably one of the major factors influencing the shape of the settlement hierarchy in the hot interior of the Tunisian Sahel. West of the Sebkhet Sidi-el-Hani numerous rural settlements have been recorded by archaeological survey, but we see nothing above settlement Class 6 over vast areas (Fig. 9.8).[60] Localised microclimates no doubt existed in some areas which in many cases allowed the sowing of a little winter grain, but one cannot escape the fact that, during Roman times, landscapes of towns and town-like settlements depended upon the close proximity of significant areas of good arable land with an appropriate climate.

9 Conclusion

This attempt to model the middle and upper parts of the Romano-African settlement hierarchy makes clear that there was not one form of urban existence but a broad spectrum, containing strong differences in the shape and depth of regional hierarchies and many different sorts of agglomeration. While the two largest cities, Carthage and *Lepcis Magna*, dwarfed all others, the shape of the settlement hierarchies within each of their vast territories looked very different. The magistrates in Carthage oversaw a large region of small and medium sized towns, whereas those in *Lepcis Magna* extracted surpluses mainly from productive farms and villages. The use of a spatial database connected with a geographical information system has allowed not just these but many regional differences to be observed. Comparison with layers representing the ruggedness of the terrain, the average per annum rainfall and the extremes of temperature, have allowed basic explanations to be forwarded for some of the distribution patterns. Large cities on the most open stretch of coastline, deeper and more densely populated hierarchies in areas of higher rainfall and greater agricultural yield, and primate cities surrounded only by villages in areas important for aboriculture and the raising of livestock. By far the greatest concentration of Roman towns, both in terms of absolute frequency and in terms of inter-site

58 Shaw 1984: 139.

59 Farooq et al. 2011: 492.

60 This is the survey region of Oued Cherita (Annabi 1998).

distance, was located in the zone most apposite for the practice of cereal agriculture. Where cereal production could not be practised with the same degree of success we find correspondingly far fewer sites which might be described in some way as towns.

It is true that these are patterns one might expect to find, but they also help us to see the areas in which Roman policy had an impact. Only a very few of the veteran colonies were truly new foundations of previously unoccupied sites, although the later ones clearly constituted a substantial augmentation of the existing population in some of the regions of the interior. It is an unmistakable fact, however, that the dominant pattern in North Africa is one of steadily developing pre-existing peregrine communities gradually achieving municipal autonomy and urban infrastructure over the course of the centuries. The creation of reliable routes to the Mediterranean Sea from the agriculturally rich interior were particularly important for the establishment of the *annona* and the transport of quarried stone from North Africa to Italy. The improvement of infrastructure in the form of roads and bridges, motivated in large part by the augmented ability they provided to extract goods as direct taxation in kind, also had the result of increasing general connectivity. Nonetheless, North African urbanism continued to be constituted by distinct clusters and bands of settlement, which maintained their own regional characteristics. The short inter-site distances and deep regional hierarchies made the experience of urban life qualitatively very different for those living in northern Africa Proconsularis and those living in a large town close to the Numidian frontier, or on the plains of Mauretania Tingitana.

Analysis of the process of municipalisation has made clear that the political functioning of the Roman Empire bound groups of settlements together in regional systems of exploitation and taxation. While subordination within the territory of a mother colony did not necessarily exclude the possibility of the development of municipal institutions and the adornment of the urban fabric with fine monumental buildings, there were real limits to the riches of North Africa's local municipal aristocracies. The number of communities which managed to build a monumentalised centre with temples and perhaps an amphitheatre at the edge of town, was far fewer than those which in the third century had been granted the status of *municipium* or honorary colony. The gradual but cumulatively very significant level of municipalisation in North Africa over the centuries demonstrates that over time the granting of municipal autonomy no longer represented a threat to Rome's ability to extract tribute from the provincial populations. It has been convincingly hypothesised, however, that it was necessary to compensate Carthage for the loss of many of her subordinate towns under the reign of Septimius Severus with the tax

relief provided by the honour of the *Ius Italicum*.[61] The institution of the *curatores rei publicae*, known in Africa from the reign of Septimius Severus onwards, also demonstrates that the central administration felt it necessary to keep a steady hand on the tiller in some cases.[62] Study of the early medieval settlement hierarchy in North Africa indicates that only the upper parts of the hierarchy continued to function as towns.[63] This demonstrates the fact that the civic life of the numerous small towns of the Roman period was a reflection and manifestation of a particular form of communal ideology, bound to a specific form of governance.

Appendix: Settlements Included in Classes 1 to 6

Class 1a): Carthage, Lepcis Magna, **b):** Hadrumetum, Iol Caesarea, Lepti Minus, Thaenae, **c):** Cyrene, Meninx, Ptolemais.

Class 2): Acholla, Ammaedara, Cirta, Hippo Regius, Lambaesis, Lixus, Oea, Rusicade, Sabratha, Saldae, Sicca Veneria, Sitifis, Thamugadi, Thelepte, Thremetra, Theveste, Thubursicu Numidarum, Uthina, Utica.

Class 3a): Abitina(e), Ad Maiores, Ad Sava Municipium, Agger, Arsennaria, Arsinoe/Taucheira, Assuras, Auzia, Avitta Bibba, Bararus, Bida, Bulla Regia, Calama, Canopis, Carpis, Cartenna, Cedias, Chullu, Cillium, Cissi, Clupea, Cullulis, Diana Veteranorum, Equizeto, Gemellae, Gigthis, Giufi, Icosium, Igilgili, Lambiridi, Lares, Macomades Minores, Macomades, Mactaris, Madauros, Mascula Tiberia, Milev, Portus Magnus, Regiae, Rusguniae, Rusippisir, Siga, Simitthus, Sucubi/Suct(…), Sufasar, Sufes, Sufetula, Sululos, Thabraca, Thaddur(…), Thagura, Thambes, Thapsus, Thibiuca, Thignica, Thizika, Thub(…), Thubunae, Thuburbo Maius, Thugga, Thullio, Tingi, Tipasa, Tubernuc, Tubusuctu, Uppenna, Vaga, Vina, Volubilis, Zama Regia, Zucchabar.

Class 3b): Obba, Sertei, Vasampus.

Class 4a): Abbir Cella, Abbir Maius, Abthugni, Agbia, Ala Miliaria/Tigit, Albulae/Praesidium Sufative, Althiburos, Apisa Maius, Aptuca/Abutucense,

61 Poinssot 1919: 194–195; followed by Poinssot (1962: 72) and Gascou (1972: 196–197).
62 Jacques 1982.
63 Fenwick 2013.

Aquae Calidae, Aulodes, Aunobari, Avedda, Babba Iulia Campestris(?), Bacchuiana Gens, Badias, Belalis Maior, Biia, Bisica Lucana, Bordj Touta, Capsa, Casae, Casula/Culusa, Chidibbia, Choba, Chul, Cincaris, Civitas Nattabutum/Castellum Ro(…), Colonia Iulia Valentia Banasa, Cuicul, Culucitanis, Curubis, Digdida Selorum, Furnos Maius, Furnos Minus, Gunugu, Henchir Bir el Achmine, Henchir-el-Houaria, Henchir-Sidi-Abd-el-Basset, Hippo Diarrhytus, Iomnium, Lamasba, Lemellef, Limisa, Masculula, Matar/Matera, Maxula, Membressa, Mopth(i?), Municipium Aurelium Commodianum, Municipium Uneniense, Musti, Muzuca (1), Neapolis, Numluli, Oppidum Novum, Pheradi Maius, Pisida, Pupput, Quiza Cenitana, Rapidum, Rucuma, Rusazus, Rusuccuru, Saia Maior, Sala, Satafis, Segermes, Semta, Septim(…), Seressi, Sicilibba, Sicingi, Sidi-Medine-el-Aala, Sua, T(…), Tacape, Tepelte, Thabbora, Thaca, Thacia, Thagari Maius, Thagaste, Thala, Thamallula Antoniniani, Thamascani, Thibari, Thibicae, Thibilis, Thigibba Bure, Thimida Bure, Thimida Regia, Thisiduo, Thisitana, Thubactis, Thubba, Thuburbi Minus, Thuburnica, Thubursicu Bure, Thunusuda, Thuraria, Tiaret, Tichilla, Tigava Municipium, Tipasa, Tucca, Turris Tamalleni, Uccula, Uchi Maius, Ulisippira, Ureu, Usula, Uzali Sar, Uzalis, Uzappa, Vallis, Verecunda, Zattara, Ziccilia, Zilil, Ziqua, Zitha.

Class 4b): AAT 1, 49.87, Aggar, Ain Balloul, Ain-el-Metouia, Alipota(?)/Gummi, Apollonia/Sozousa, Aquae Sirenses, Ashabi, Augarmi, Bagai, Chellala des Adaoura, Cuttilula, Douar Mazouna, Dra Zeg et Ter, Gouraya, Henchir Chammar, Henchir El Left, Henchir el Makkaber, Henchir Erroumi, Henchir es-Somaa, Henchir Sidi Slimane, Henchir Terchga, Henchir-ed-Dalia, Henchir-el-Guellal, Henchir-el-Hadid, Henchir-Ksar-el-Ahmar, Henchir-Rhiria, Kherba des Ouled Hellal, Kherbet Ced Bel Abbas, Koubba de Sidi Hamza, Leges Maiores, Midila, Mina, Nova Sparsa, Novar(icia?), Phykous, Sarsura, Sidi Bayyech, Sidi-Salah-el-Balti, Tacatua, Tasaccora, Thimisua, Toutaden, Tucca Terebenthina, Ucubi, Vazari, Vieux Ghardimaou, Zabi (Iustiniana), Zeta.

Class 5a) (…)rdensium, A(…), Abadi, Abbi(…) / (…)sinsensium, Ain-el-Blate, Ain-el-Kheraib, Ain-Guerchba, Ain-Rchine, Altava, Antipyrgos, Aradi, Avensa, Avioccala, Beled Belli, Biha Bilta, Biracsaccaria, Castellum Arsacalitanum, Castellum Caldis, Castellum Elefantum, Castellum Tidditanorum, Celtianis, Cercina, Chiniava, Chusira, Civitas (…)iana, Civitas Furc(…), Civitas Gentis Suburburum/Idicra, Civitas M(anange?), Civitas Mizigitanorum, Civitas Se(…), Civitas Sivalitana, Djebel Touta, Gales, Garbe, Geumi, Gillium, Girba(?), Gor(…), Gurza, Henchir Ben Glaïa, Henchir-Belda, Henchir-Negachia, Henchir Ouzra, Horrea Caelia, Ksar Tyr, Lamiggig(a?), Limnias, Macota, Maragui Sara(?), Med(iana?), Mididi, Naraggara, Naustathmos, Nepheris, Numerus Syrorum,

Pagus Suttuensis, Pagus Thac …, Pagus Thunigabensis, Pagus Trisipensis(?), Phua, Pomaria, R(es) P(uplica) Totiens(ium), Rotaria, Ruspe, Ruspina, Sabzia, Saddar, Saradi(…), Septem, Siagu, Sidi Naoui, Sigus, Sila, Sustri, Taparura, Tapphugabe(n)sis, Thabarbusis, Theudalis, Thibuli, Thigibba/T(h)igimma, Tigisis, Tituli, Tuccabor, Tunes, Uchi Minus, Ucres, Urusi, Uzaae, Uzelis, Vaga aliud, Vazi Sarra, Vicus Annaeus, Zarai, Zucchari(…).

Class 5b) Balagrae, Berenice, Civitas Popthensis, Djebel Moraba, Hadrianopolis/Kaukalou Kome, Mesarfelta, Nara, Sutunurca, Tigava Castra, Vicus Augusti (1).

Class 5c) Ad Calceum Herculis, Agabis, Ain-Golea, Alma, Ampalaontes, Apisa Minus, Aptouchou Hieron, Aquae Thibilitanae, Aras, Asefsou, Aziris, Barke, Bennafa, Bir-Oum-Ali, Bratis, Castellum Tingitanum, Castellum Vanarzanense, Catabathmus Maior, Cen(…), Chairekla, Chersis, Cit(…), Columnata, Corniclanum, Darnis, Elephantaria, Erythron, Gasr Beni Gdem, Guiard, Henchir Bourgou, Henchir el Oust (1), Henchir Mechri, Henchir Terfech, Henchir-Dehamine, Henchir-el-Faouara, Henchir-el-Oust (2), Henchir-Souma-Rous-el-Aioun, Hydrax, Iustinianopolis, Ksar-el-Guellal, Lasamices, Manliana, Mgarnes, Missua, Onellaba(?)/Odiana, Oppidum Novum, Ras el-Melah, Rusaddir, Semeros, Sidi Ali El Bahloul, Sidi Nuah, Souama de Mecherasfa, Sullecthum, Tegea, Tetcitana/Caraga/Lasica, Tfilzi, Thabudeos/Tabudium Oppidum, Thanaramusa Castra, Theodorias, Thiges/Castellum Thigensium, Thinisa/Tuneiza/Tunisa, Timici, Tocolosida, Trois Îlots, Ulules, Vahartanenses, Vescera.

Class 6) Ad Atticille, Agarlabas, Agma Sive Fulgurita, Ain bou Arar, Ain Kerma, Ain Kerma, Ain Schkour, Ain-el-Djenane, Ain-el-Hamedna, Ain-Terguellache, Ain-Teserat, Aquae Carpitanae, Aquae Regiae, Aquae Tacapitanae, Aquilaria, Arbaoua, Asilah, Asuccuris, Aubuzza, Ausigda, Avidus Vicus, Bersis, Bie el Araba, Bir ez Zitoun, Bir Meraktite, Blad Guitoun, Bled Mchahad, Boulalem, Bulla Mensa, Casae Calventi, Castellum (…), Castellum Dianense, Castellum Elephantaria, Castellum Zugal, Cellas/Castellum Cellense, Cerva(?), Charax/Iscina, Cilibia, Coreva, Cottae, Damous, Eddouamis, el Adeb, el Azari, El Kandar, El Ksar, El Omrane, el Senadek, el-Garib, el-Gasseur, el-Knissia, El-Mjalis, el-Mtaugat, er Rmel, Euphranta/Macomades, Ferme Priou, Gasr Silu, Gemellae, Gheriat el-Garbia, Gholaia, Gidaphtha, Guelalia, Haribus, Hariguet el Kelabi, Henchir Aoun, Henchir Ben Amara, Henchir ben Dimia, Henchir Ben Moussa, Henchir Bou Jniba, Henchir Boukadi, Henchir Contra, Henchir Ech-Choguaf, Henchir Edjjeniine, Henchir el Abid, Henchir el Assel, Henchir el Feja, Henchir El Hadid, Henchir el Hajjaj, Henchir el Hammam, Henchir el Majen, Henchir el

Merigueb, Henchir El Zakham, Henchir El Zakzak, Henchir ez Zaouia, Henchir Ezzriba, Henchir Fattouch, Henchir Moussa, Henchir Oued Cheriaa, Henchir Sidi Barka, Henchir Tafernine, Henchir Tebraria, Henchir Ziaet, Henchir-Bab-Khaled, Henchir-Ben-Kremis, Henchir-Bou-Okkaz, Henchir-Chelga, Henchir-el-Abiod, Henchir-el-Gousset, Henchir-Gabgab, Henchir-Khemissa, Henchir-Maherza, Henchir-Meskine/Sidi Ayed, Henchir-Moussa, Henchir-Ouled-Ahmeda, Henchir-R'mel, Henchir-Sidi-Bou-Douib, Henchir-Zelba, Horrea, Hr Khawlan, Icherène, Ichoukkane, Inkermann, Inuca, Jbel Boughabhouba, Kainopolis, Kalaa (AAA 12.102), Kerkab, Kherba Achlef, Kouass, Ksar es Sghir, Ksar Roumi, Ksir Ennisf, Lambdia, Lamsorti, Lobrin(…), Lucu, Macri(?), Maracitana, Marsa Gabes, Martae, Masclianae, Medeli and Pagus Mercurialis, Mediccera, Médiouna, Membrone(?), Mennzel-bel-Gassem, Mersa Madakh, Mesphe, MM18, Mtalsa, Muzuc (2), Nepte, Nicivibus, Oglat Khira, Orbita(?), Oued el Gastla, Pagus N(…), Pagus Thigillava, Paliouros, Perdices(?), Picus, Putea Pallene, Ras Maamoura, Rirha, Rusubbicari Matidiae, Safsaf, Sbiya/Assabaya, Severiana gens, Si Slimane, Sidi Abdul Wahed, Sidi bou Argoub, Sidi Hassène, Sidi Larbi Boujema, Sidi Mbark, Sidi Mechrig, Ruins west of Sidi Mohammed Bouaziz, Sidi Moussa, Sidi Said, Sidi Slimane/Sidi Ali Bou Abid, Sidi-Ahmed Rouigeud, Sidi-Ali-Bou-Khraled, Sidi-Ali-el-Haouam, Siminga, Siminina, Siret Bu Hosh, Souk el Arba, Souk el Khemis, Souk Jema el Haouafa, Subututtu, Sugolin, Suo, Tagamuta, Tansoluch, Taougnaout, Tariglach/AAT I 12, 172, Tepidae, Thamusida, Thenadassa, Thenteos, Thinissut, Tigisi, Tillibari, Tucca/Paccianis Matidiae, Tuniza, Vagal, Vanisnesi, Varturliani, Vatari, Vicus Augusti (2), Vol(itanus), Wadi al Kelate, Zaviet Ennablu, Zigira.

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CHAPTER 10

A Diachronic and Regional Approach to North African Urbanism

David Stone

1 Introduction

Scholarship on ancient North African urbanism has traditionally focussed on empirical questions. The most prominent among these has been the extent to which a city resembled 'the classical city', a concept that involves the role of elites in aspects of political and cultural life as well as the presence of specific building types and architectural styles. Institutions, juridical status, dates of foundation and abandonment, and interaction between local North African populations, Phoenician settlers and Greek and Roman colonisers have also been major research topics. One of the main achievements of this scholarship has been to document the spread of urbanism across the southern border of the Mediterranean.[1] But it could also be argued that, with the focus on Phoenician, Greek and Roman influences, scholars have overlooked alternative approaches to the study of urbanism. The Althiburos and Fazzan Projects have recently demonstrated that North African cities could originate without external influences, and these results confirm the importance of new approaches to urbanism.[2] In this paper I explore a different approach that emphasises the close connections between urbanism and rural settlement in regional systems.

2 Approach

This paper contributes to the study of cities in North Africa by looking for spatial and chronological variation through an evaluation of regional settlement patterns over the *longue durée*, from about 500 BCE to 700 CE.[3] The specific

1 For previous scholarship, see, *inter alia*: Bullo 2002; Picard 1959: 19–36; Gascou 1972; Février 1982; Leone 2007a; Lepelley 1979; Sears 2007; and Sears 2011.

2 *Althiburos*: Kallala and Sanmartí 2011; Sanmartí et al. 2012; *Fazzan*: Mattingly 2001; Mattingly 2013.

3 On what constitutes a city in North Africa, I prefer a flexible definition that I have employed

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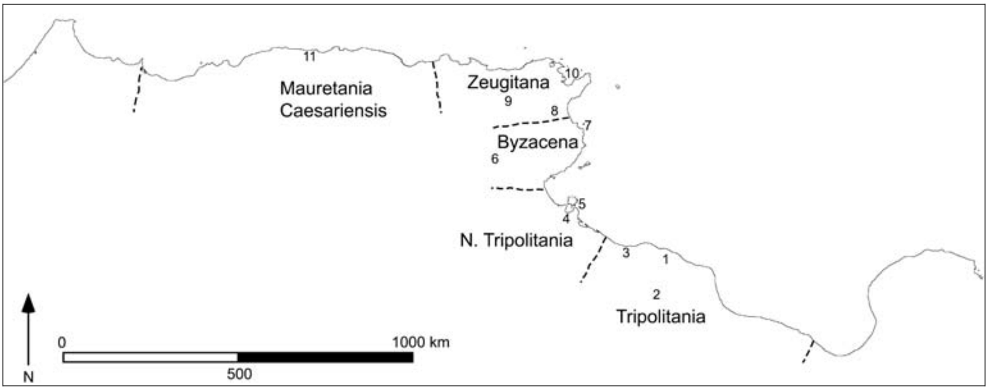

FIGURE 10.1 Map indicating regions and locations considered
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time period has been selected because its ceramic material is recognisable and relatively easy to date; on either side of this period, however, it is more difficult to acquire sufficient dating evidence. This region-by-region and diachronic approach utilises the results of surface survey, the archaeological methodology most suitable for long-term and large-scale examinations. Although the evidence of regional surveys might at first glance appear relevant only to the rural landscape, patterns in urban and rural landscapes were closely interconnected in ancient North Africa, as elsewhere in the ancient Mediterranean, and therefore we should evaluate them together. Comparative examination indicates that urban settlements in North Africa flourished over the *longue durée* in just a single region (Zeugitana), while they were much shorter-lived in others (Tripolitania, northern Tunisia, Byzacena and Mauretania Caesariensis) (Fig. 10.1). These conclusions contrast with those of studies that derive widely-applicable patterns from several North African cities.[4] By examining differences among urban trajectories that have rarely been the focus of inquiry, this study offers new insight on the chronology of North African urbanism and on the methodologies relevant for addressing it.

elsewhere (Stone 2013: 128). A city has a population density well above nearby settlements and residents who include upper classes and workers not directly involved in food production, even though a large percentage of its other inhabitants may be engaged in agriculture. Cities are equally defined by the activities performed in them: leaders make political and administrative decisions and disseminate ideology, religious rituals are performed, long-distance trade occurs, workers manufacture specialised commodities. Individual cases generally demonstrate most of these characteristic features, but not necessarily all of them.

4 E.g. Sears 2007; Sears 2011; and Evers 2010 although these by no means represent a universal approach. Leone 2007a is perhaps the best example of a broader inquiry.

My approach in this paper is to use newly published data on ceramic production and field surveys to create a multi-regional and diachronic picture. The new data, I argue, allow us to differentiate North African regions to a much greater degree, rather than considering the entire area as a unified sphere of activity in the Roman period. The other important aspect of my argument is our chronological understanding of cities and regions in North Africa. I aim to show how regional patterns operated on different timescales, and then to connect these timescales to patterns of urbanism.

There is a tendency, perhaps more among non-Africanists than among Africanists, to view North Africa as one large unit. One example of this tendency can be found in Bryan Ward-Perkins' *The Fall of Rome and the End of Civilization*, in which the author graphed the economic complexity of various provinces in the late empire.[5] Ward-Perkins' analysis is masterfully constructed at an empire-wide scale, and the author himself admits that the graph is an impressionistic view of general trends rather than a calculation made from specific data. Yet, one of the difficulties with a graph like this is that it implies that patterns in each region of North Africa were similar. I think this very unlikely, and to make this point I will show that if we examine Africa more closely, some very different regional patterns emerge, and these more nuanced regional economic analyses lead to different conclusions.

The significance of differences in regional patterns first became evident to me through an article I wrote on North African harbours in which I identified 29 definite and a further 16 possible man-made jetties, quays, enclosures and breakwaters.[6] I developed a metric to assess the servicing capacity of these harbours that I termed 'wharf length': the total length of jetty (extending into the water) or quay (running along the shore) at which a boat could dock. The article defined several regional 'clusters' within North Africa where investment in these artificial port structures was particularly extensive (Fig. 10.2). The regions were linked by their design, by evidence of the production of similar goods, by the presence of Roman administrative districts, and by their period of construction—although precise dating was often impossible. In considering the size and scale of these regional clusters, I measured them by their total wharf length, and I argued that this metric was a proxy for the importance of these regions as producers of surpluses for export, although it is clear that this is only a rough proxy as we are lacking evidence about many port structures. Despite similarities, the regions did not display identical patterns; some had one or two large harbours, others had several harbours at approximately the

5 Ward-Perkins 2005: 122.
6 Stone 2014.

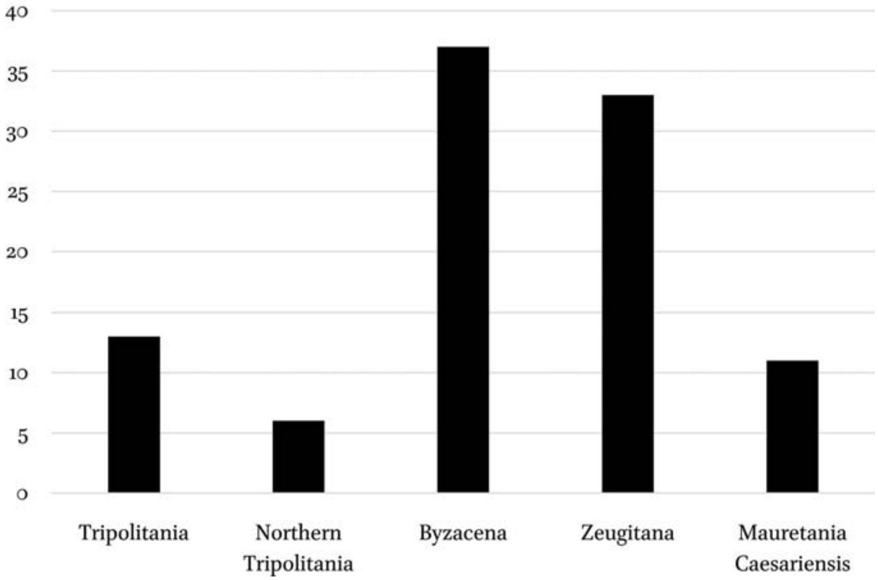

FIGURE 10.2 Percentage of total wharf length, by region
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same size. Distinct differences in wharf length between the regions suggested that some regions should be rather more important than others in terms of shipping goods to Rome and elsewhere in the Mediterranean.

I argued that the primary explanation for building artificial port structures must be the strong correlation between these structures and the nearby production of amphorae for the export of surpluses, primarily olive oil, wine, and fish. Although it is possible to service boats docked on the shore, in shallow water, or anchored offshore at a distance, manoeuvring heavy items under such conditions is difficult. On the other hand, it is relatively easy for boats docked alongside a jetty to discharge and take on cargo rapidly.[7] Enclosures, jetties, and breakwaters also provide a haven against winds and waves and enhance the security of vessels.

Most attempts to connect the urban and rural evidence from North Africa together over the *longue durée* focus on individual regions, rather than being more broadly applicable. One study notable for its multi-regional approach compared rural landscapes in Zeugitana, Byzacena and Tripolitania from the fourth to seventh centuries CE, however.[8] It considered data from six field sur-

7 Blackman (1988: 11) argued that the most efficient method of handling cargo is to dock boats broadside and then extend a ramp between the boat and the dock.

8 Leone and Mattingly 2004.

veys, from economic activities in urban centres and from literary sources. The study detected differences in regional trajectories: rural settlement endured in Tripolitania until the fourth century CE, in Byzacena until the end of the fifth century CE, and in Zeugitana until the mid-sixth century CE.[9] The evidence from urban centres showed a broad reduction in pottery production for export, and in some cities a greater reliance on meat from sheep and goats, as opposed to pigs and cattle, though the evidence for this was not uniform.[10] The authors divined from the literary sources that Zeugitana experienced much more significant land confiscation at the hands of the Vandal conquerors of North Africa (439–533 CE) than either Byzacena or Tripolitania.[11] In their conclusions, they noted that changes in rural landscapes could be correlated with those in urban settings.[12] The useful analysis in that study exemplifies what this paper now attempts over a broader geographic area and far longer time span. The publication of field reports on areas such as Jerba, *Thugga*, *Leptiminus* and *Lepcis Magna*, which the authors did not have at the time they wrote, also makes it possible to produce a new synthesis.

The regions that I have chosen largely conform to those imposed as provincial boundaries under Diocletian. This choice was made to subdivide North Africa into several smaller analytical units.[13] Beginning in the East and moving West, this paper will cover evidence from five regions for which sufficient data exist for an examination: Central Tripolitania; Northern Tripolitania; Byzacena; Zeugitana; and Mauretania Caesariensis. It will attempt to present for each region comparable information about cities, chronologies of occupation, rural landscapes and evidence for export production.

Each of these criteria may contribute to the overall goals of our investigation. The number of cities and the various sizes of these cities are helpful in gauging how widespread urbanism was. For these numbers, I draw on Jack Hanson's assessment of the number of cities throughout the Roman empire; although a large-scale overview that may not be correct in every detail, its North African data constitute an improvement when compared with older assessments that drew too heavily on literary sources and too little on archaeological evidence.[14]

9 ibid. 149.

10 ibid. 152–153.

11 ibid. 153.

12 ibid. 156.

13 I acknowledge that my choice of Roman-era political units here does risk imposing criteria that may have influenced the patterns that I analyse. Other ways of organising the study, such as focusing on river valleys or other geographic features, could have been chosen, and indeed are worthy of investigation in the future.

14 For example, Picard (1959: 22) counts 500 cities based entirely on literary evidence, while Hanson (2016: 193ff.) catalogues 143. Hobson, in this volume, lists 319 North-African cities

The chronology of occupation at cities is important in order to know the dates of foundation and abandonment of urban centres, even though this information can often only be approximated. It is critical to recognise that a long duration of occupation does not indicate that the city played an important role during this entire period, just as the maximum extent of a city does not tell us whether the full extent was occupied during the duration of its existence. To understand something about when a city was playing an important role, it will help to investigate the chronology of settlement in its rural landscape, and the evidence for its export production.

3 Tripolitania

The origins of the three Tripolitanian cities lie both in their use as harbours for Phoenician sailors and as farming communities, particularly in the relatively good agricultural land close to *Lepcis Magna* and in the oases near *Oea* and *Sabratha*. The early history of these cities dates on current knowledge from the seventh to fifth centuries BCE; they appear to have come under the direct control of Carthage gradually.[15] *Oea*, lying beneath modern Tripoli, poses challenges for modern investigators, but similar developmental histories have been detected at *Sabratha* and *Lepcis Magna*. An initial urban core was surrounded by cemeteries. Expansion in the second and first centuries BCE led to the rebuilding of these areas and the construction of public squares and surrounding districts in a grid plan. The growth of both cities in the first and second centuries CE led to the planning of new gridded areas on different alignments at a greater distance from the centre, such that individual phases can easily be distinguished on a plan. At least three different alignments can be detected at both *Lepcis Magna* and *Sabratha*, which reached their peaks in the Antonine and Severan periods. The contraction of Tripolitanian cities dates from the fourth century CE.[16] Not only do building inscriptions decline in the

which were certainly or probably self-governing by the mid-third century CE (classes 1a–4a, 5b–c) as well as an additional 77 settlements which might have been autonomous in this period (classes 5a–c). Some large settlements (20–49.9 ha) in which no traces of public buildings have been identified (class 4b) are also likely to have been self-governing. These figures suggest that the total number of self-governing cities in Early Imperial Roman North Africa was at least two times higher than claimed by Hanson. As some of the underlying data are still unpublished, the present study remains based on Hanson's catalogue.

15 Bullo 2002: 166–167 (*Lepcis Magna*); 188 (*Sabratha*); 211 (*Oea*). Mattingly 1995: 116–118 (*Lepcis Magna*); 125–126 (*Sabratha*); 122–123 (*Oea*).

16 On the contraction of Tripolitanian cities in the fourth century CE, see especially Mattingly 1995: 171–185.

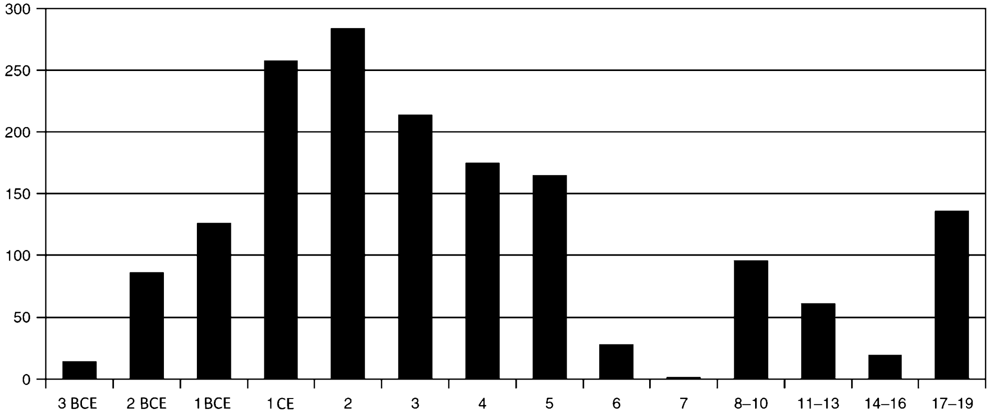

FIGURE 10.3 Lepcis Magna survey rural site numbers
DATA DRAWN FROM MUNZI ET AL. 2016: 69

early fourth century, but also literary sources mention greater anxiety about raids from tribal groups in the pre-desert, whose pillaging of the coastal cities is recorded in particular detail in the 360s CE. At the same time, in both *Lepcis Magna* and *Sabratha* there is evidence for the conversion of temples, market-places, and entertainment buildings into private structures.

Field surveys have documented chronological patterns in Tripolitanian rural landscapes that can be compared to patterns of urbanism. In the hinterland of *Lepcis Magna*, a large-scale survey has been carried out since 1995, and a detailed publication of the results of some areas surveyed, particularly those within 10 km of the city, between Ras el-Mergheb and Ras el-Hammam, exists.[17] What is most striking is the rapid rise and decline of rural settlements in antiquity (Fig. 10.3). The initial exploitation of the rural territory of the city began in the third century BCE (12 sites), though it is much more noticeable in the following two centuries (72 and 98 sites). Rural settlement reaches a peak around 100 CE (130 and 129 sites in the first and second centuries CE). In the third, fourth and fifth centuries the numbers are reduced (94, 66 and 65 sites), though not drastically so. The survey team concluded that a swift decline in rural settlement occurred in the second half of the fifth century, and only 13 sites dating to the sixth century were located.

The UNESCO Libyan Valleys Survey documented patterns in the pre-desert of Tripolitania at a much greater distance (50–300 km) from the coast in a

17 Data in the following derive from Munzi et al. 2016: 69–73, although observations are also based on the project's earlier publications referenced there.

region with an average annual rainfall below 100 mm.[18] This area did not yield the same evidence for increased settlement in the second and first centuries BCE that the territory of *Lepcis Magna* did. Numbers of rural agricultural establishments instead began to rise in the first and second centuries CE, peaking in the second century. After 200 CE, there was a major shift from 'open farms' to 'fortified farms'. Settlement numbers dwindled during the third to fifth centuries, although some of the fortified farm sites were larger in size than the earlier open farms. Despite their location in inhospitable terrain at considerable distance from the coastline, farms in the Libyan Valleys Survey area appear to have specialised in the cultivation of olives for export. Production of a surplus was achieved through diligent management of floodwaters that were diverted onto crops through an elaborate system of downslope channels, cross-wadi walls and sluice gates.

The main product exported from Tripolitania appears to have been olive oil manufactured in the landscapes to the south of the main cities. Sites recorded by the Lepcis Magna Survey, as well as others known from the region, possessed a large number of olive presses. In the pre-desert region studied by the Libyan Valleys Survey, olive presses are also found, though they are not so common.[19] Two of the three main amphora types from the region, the Tripolitana I and III, were produced at the olive presses and in the coastal cities and have been identified as oil amphorae.[20] They are abundant in second and third century levels at Monte Testaccio and elsewhere at Rome.[21] The Tripolitana II amphora probably carried fish or wine, rather than oil, based on their absence from Monte Testaccio.[22] Other products from Tripolitania can be suggested but are harder to confirm through archaeological evidence; these include slaves, gemstones and textiles.[23]

4 Northern Tripolitania

Cities on the Gulf of Gabès have often been seen as linked to areas to the north or south, but their many differences with neighbours are a sufficiently good rea-

18 For the following discussion of the UNESCO Libyan Valleys Survey, see Barker et al. 1996.
19 Hobson 2015: 95–99.
20 Bonifay 2007: 23.
21 Revilla Calvo 2007.
22 Bonifay 2007: 23; Hobson 2015: 116.
23 On the sources of these items that may have been traded through or from the Sahara, see Mattingly et al. 2017.

son to assign them their own regional identity: 'Northern Tripolitanian'. These urban centres never had the same prominence as the major central Tripolitanian cities, to which they were linked administratively from the third century CE, but separated by at least 175 km. The five cities of northern Tripolitania in Hanson's catalogue had small rural territories, a function of their proximity to each other, to nearby salt flats and to the Sahara Desert. These cities must have been connected to settlements in the interior by overland trade, but the extent of trade is not well known, unlike the better-documented connections on the one hand between cities of coastal Byzacena and the interior and on the other among coastal Tripolitania, the pre-desert and the Sahara.

The beginnings of urbanism may date to the fifth century BCE in northern Tripolitania, although little remains from this date. Most impressive are the remains on the island of Jerba, where there were as many as four towns in the fourth century BCE. *Meninx* was the major coastal port and may have been a Punic foundation, while Būrgū, some 7 km inland, reached nearly 20 ha in size by the second century BCE. According to Lisa Fentress, Būrgū "has all the qualities of an agrotown" and provided grain, wine and other products to the island's ports.[24] *Meninx* appears to have eclipsed the other settlements and become the major city from the first to sixth centuries CE, but it experienced a rather abrupt decline from the early sixth century.

Elsewhere in northern Tripolitania, the three most prominent mainland cities are *Tacapae*, *Gigthis* and *Zitha*. *Tacapae* is poorly known: as an oasis it continued to function long after antiquity, and its early structures have been dismantled or otherwise lost. *Gigthis* and *Zitha*, on the other hand, have undergone archaeological examination. Both may have originated by the fourth or third century BCE and have evidence of neo-Punic inscriptions as well as monuments associated with Julio-Claudian emperors.[25] The peak of both towns appears to have been the second century; at *Gigthis*, activity continued into the fifth century, but may have ceased earlier at *Zitha*. One reason for the decline of both cities may have been the increasing importance of *Meninx*. A road from *Meninx* to the Zarzis peninsula was probably constructed in the second century CE, cutting off the eastern access to the Sea of Bou Grara and reducing the ability of ships to reach the ports of both mainland cities.[26]

The intensive field survey of the island of Jerba provides most information about rural landscapes in northern Tripolitania. The survey shows the beginnings of rural settlement as early as the late fourth century BCE and a demon-

24 Fentress et al. 2009: 76–80, 207.
25 Mattingly 1995: 128–132.
26 Fentress et al. 2009: 157.

TABLE 10.1 Jerba Survey site numbers (data drawn from Fentress et al. 2009)

	Urban centers	**Villages**	**Villas**	**Farms**
Early Punic (325–250 BCE)	4	8	13	32
Late Punic (250–50 BCE)	4	13	23	93
Early Roman (50 BCE–150 CE)	4	13	23	83
Middle Roman (150–300 CE)	4	12	24	68
Late Roman (300–500 CE)	4	8	20	63
Late Antique (500–700 CE)	3	8	17	35

strable peak from the second century BCE to the second century CE. During the late Punic and Early Roman periods, respectively, surveyors discovered the highest totals of identifiable villages, villas and farms (Table 10.1).[27] Occupation at many of these settlements continued through the fifth century CE, but declined rapidly afterwards. The survey's investigators have suggested that the downturn took place in the first half of the sixth century.[28]

The Jerba survey discovered 16 kiln sites on the island of which 15 produced African Schöne-Mau 35 amphorae of the first to second century CE date. A smaller number were involved in other productions: eight produced Van der Werff 2 and 3 amphorae of the Punic tradition (mid-second BCE to late first century CE), three yielded evidence for Tripolitana I amphorae (first century BCE to first century CE), three for Africana II amphorae (second to fourth century CE) and two for Keay 25 amphorae (fourth and fifth century CE).[29] It is clear that Schöne-Mau 35 amphorae were numerically the most significant export production: a total of 862 sherds were found on the survey, far more than the Van der Werff 2–3 (117 sherds), Tripolitana I (22 sherds), Africana II (61 sherds) and Keay 25 (94 sherds). Sergio Fontana, who studied the ceramics from the Jerba Survey, identified the contents of these amphorae as wine (Van der Werff 2, Schöne-Mau 35 and Keay 25), oil (Van der Werff 3, Tripolitana I) and fish-products (Africana II).[30] Other evidence for exports from Jerba suggests an additional range of products, including purple-dye, textiles and slaves.[31]

27 Numbers are drawn from the text and maps in Fentress et al. 2009.
28 Fentress et al. 2009: 189–200.
29 Fentress et al. 2009: 272.
30 Fentress et al. 2009: 272–292.
31 ibid. 208.

Amphora production at *Zitha* has been the subject of a careful recent study by Elyssa Jerray, who documented 9 kilns to the west of the urban centre. These kilns produced Tripolitana I and III and African Dressel 2/4 amphorae, dating from the 1st to the mid-third century CE, but not beyond.[32] Jerray's collections also suggest a very small number of Africana I and IIA amphorae were produced. From the quantity of amphorae discovered at the kilns of *Zitha*, it would appear that its primary export product was olive oil, and that it may have exported small quantities of wine and fish.

5 Byzacena

The 20 cities in Byzacena in Hanson's catalogue well surpass that of the regions considered previously, and the ability of both coastal and interior locations to support urbanism is the most important factor in the difference. Evidence for early settlement comes from *Hadrumetum*, where Punic material of the sixth century BCE has been discovered.[33] At other ports like *Leptiminus* and *Thapsus*, the earliest Punic tombs can be dated to the fifth century BCE.[34] The remainder of the port cities in Byzacena, including also *Thaenae*, *Cercina*, *Taparura*, *Acholla*, Mahdia (*Gummi*?) and *Ruspina*, appear to have their origins by the third century BCE. Major urban centres in the interior of Byzacena are sparse in the first millennium BCE, but not nonexistent, especially at important crossing points on the Tunisian Dorsale between the High Steppe and the Tell regions. *Mactar* and *Thala* are two sites founded not later than the third century BCE that fall in this category. *Thysdrus* was evidently of Punic origin, although there is little evidence of its existence prior to the late first century BCE. Many more cities in the interior, such as *Cillium*, *Ammaedara* and *Sufetula*, originate after the Roman conquest of Carthage in 146 BCE.

Assessing the decline of cities in Byzacena is not an easy exercise. The desire of excavators to remove late antique materials in order to reach deposits of the Roman or Punic period has resulted in poor recording of many of the uppermost strata.[35] There is a tendency, too, for studies to concentrate on the same cities; thus, the archaeological evidence from *Ammaedara*, *Hadrumetum*, *Sufetula* and *Thysdrus* has been well discussed.[36] A variety of cities appear in

32 Jerray 2016: 165.
33 Trousset 2000: 3309.
34 Ben Younes 2007: 41.
35 A point made by Leone 2007b, among others.
36 E.g., Leone 2007a; Sears 2007.

the epigraphic evidence, but discussions of inscriptions have not given corresponding consideration to archaeological evidence.[37] The greatest extent of many cities in Byzacena appears to be the third century CE, but their decline is variously dated afterwards. In some locations, such as *Thysdrus* and *Leptiminus*, the insertion of graves into third-century house floors suggests a decline of outlying areas in the fourth century. The reorganisation of *fora*, baths, temples and other major civic spaces does not normally date until the sixth century.[38] At this time, many cities were considerably smaller than their mid-Roman extent; the evidence of kilns in former public spaces at *Leptiminus* or olive presses placed in the middle of the street at *Sufetula* attest most memorably to the changes.[39] The construction of defensive walls during the Vandal and Byzantine eras attests that the urban core of numerous cities had been greatly reduced.[40] The scene of declining cities at the time of the Byzantine reconquest in 534 is well-recognised, and the pattern continues through the seventh century. It is important to recognise that some cities did expand from the eighth to tenth centuries CE in the aftermath of the Arab conquest. Such is the case at sites which expand considerably in the early Islamic period, including Kairouan, Mahdia and Monastir.[41]

The rural landscape of Byzacena offers perhaps some of the most important clues to understanding the chronology of settlement in this region. The evidence derives from two field surveys, at *Leptiminus* and Kasserine. The survey at *Leptiminus* covered only about 10 km^2—the city and its immediate hinterland. A very small amount of black-glaze pottery indicates activity in the third and second centuries BCE, mainly in the area of the first city centre and cemeteries. In the surrounding countryside, the earliest evidence is from the first century BCE, in the form of Campanian black-glaze and imported Italian amphorae.[42] Rural agricultural activities must have begun by then, but expanded in the first century CE, to which nearly 300 of about 5,600 identifiable sherds can be dated (Fig. 10.4).

Systematic gridded collections occurred at 8 sites in the countryside that seem likely to represent occupation (as opposed to cemeteries, lithic scatters, etc.). At 7 of these sites there was evidence from the first century CE. More than half (54%) of the ceramic finds in the countryside belong to the second and

37 E.g., Lepelley 1979.
38 Leone 2013: 76–82.
39 Stirling et al. 2001: 51–72. Duval 1982: 625.
40 Pringle 1981.
41 Djelloul 1999.
42 On this and what follows, see Carr 2011.

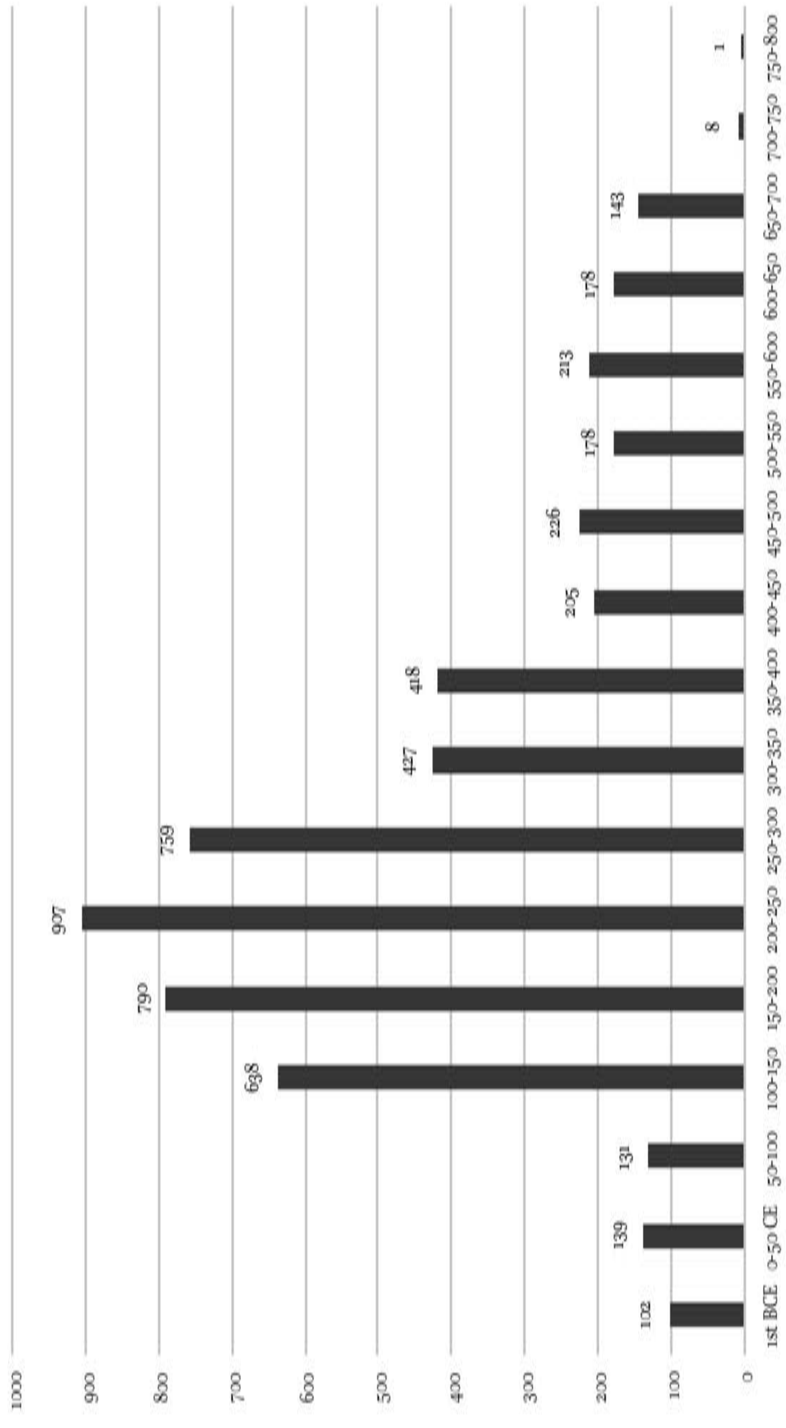

FIGURE 10.4 Leptiminus rural survey ceramics
DATA DRAWN FROM CARR 2011

third centuries CE, which is the apex of occupation in the city centre as well as the hinterland.[43] The fourth century marks a significant reduction from the third in datable material in the countryside, but overall is not poor: about 15% of the total identifiable pottery dates to this century, and it is found at all the sites where collections were undertaken. In the fifth and sixth centuries occupation continues at these sites, although the total quantity of ceramics declines to a little below 10% each year. In the seventh century, the number of datable sherds is roughly equivalent to that in the first century CE, but again there is evidence for occupation at almost all of the rural sites, and there is considerable evidence at two of them, and one may continue into the early Islamic period. Thus, at *Leptiminus*, there appears to be continuous occupation from the early Roman to Byzantine periods, but a much greater extent of occupation is evident in the second and third centuries.

The Kasserine survey covered 75 km^2 around the city of *Cillium* in the High Steppe region of Tunisia. Its development differs from that of *Leptiminus*. First, the territory of *Cillium* lies between 150 and 200 km from the coast; second, although there is considerable evidence for the presence of local tribes in the landscape before this time, the city probably originated as a Roman *castellum* in the first century CE.[44] The earliest sherds found by the survey were two pieces of Gallic *terra sigillata* dating to the first century CE, but by the second century there was a significant growth in the number of occupied farms.[45] The main period of growth, not only in terms of the number of settlements, but in their size and the scope of industrial and agricultural activities, can be defined as the third to fifth centuries. During this period olive presses, counterweight blocks, oil-settling tanks, millstones and animal pens could be identified at all but the smallest sites, and the material remains of almost all of the rural sites examined by the Kasserine Survey indicated an orientation toward surplus agricultural production. The Kasserine Survey recovered more than one press every two km^2, the second highest density among 26 recent surveys in Tunisia.[46] Abandonment began in the fifth and continued into the sixth and seventh centuries.[47]

The products of Byzacena were shipped in recognisable amphorae throughout the Roman empire, though they were more regularly distributed in the

43 Stone et al. 2011: 273–288.
44 For *Cillium*, see Gascou 1972: 86–89.
45 Hitchner 1988: 39–40.
46 Hobson 2015: 82. For slightly different figures, in which Kasserine ranked highest among 10 surveys published at the time, see also Stone 2004: 139.
47 Hitchner 1988: 40; Neuru 1987.

west Mediterranean.[48] Olive oil, fish-products and wine were carried in these amphorae, but the scale of production of each of the three products is a subject of debate. Recent scholarship has tended to place a greater emphasis on fish-products than olive oil, although earlier the situation was reversed;[49] wine has generally come in third place, but assessments of its importance have been growing, due to a closer analysis of press facilities that were once interpreted simply as destined for oil production. That there is considerable evidence for the surplus production of both olive oil and salted fish and fish sauces is not disputed. Numerous tanks found on the coast of Byzacena document the fermentation of fish.[50] The olive presses recorded by the Kasserine Survey are a fraction of the total known from antiquity elsewhere in the interior of Byzacena. Both the oil and fish would appear to have been bottled along the coast; kilns producing a range of amphora types are known in all of the major cities of Byzacena: *Hadrumetum*, *Leptiminus*, *Thapsus*, *Sullecthum*, *Acholla* and *Thaenae*. The best documented of these kilns, at *Leptiminus* and *Sullecthum*, yielded products from the first through seventh centuries CE in varying proportions.[51] Amphorae of the second and third centuries (Africana I–II) were the most common, as was also the case at *Hadrumetum*, *Acholla* and *Thaenae*. On the basis of residue analyses, vessel morphology, the presence of pitch lining and findspots of the amphorae, it would appear that large quantities of both fish-products and oil were exported. During the fourth and fifth centuries the kilns produced a far smaller volume of exports, with the Africana III the main product at this time and more prominent at *Sullecthum*. If our understanding of amphora typologies and chronologies is correct, explaining the downturn at *Sullecthum* and *Leptiminus*, which is matched by a corresponding increase of production around *Neapolis* on Cap Bon, is an important area of research. Whether, or how, we are to attribute the changes to the Vandal takeover of North Africa from 439 to 533 is an open question.

In the sixth and seventh centuries, there was again considerable export production at *Sullecthum* and *Leptiminus* (Keay 61 and 62 amphorae). These amphorae may also have carried both fish and oil. The quantities of these amphorae found at *Leptiminus* suggest that sixth and seventh century amphora production was 15 % of the overall total while that of the second and third centuries was 72 %.[52]

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48 Stone 2009.

49 Bonifay 2004; Bonifay 2007; Mattingly 1988.

50 Slim et al. 2004.

51 *Leptiminus*: Stone, Mattingly and Ben Lazreg 2011; *Sullecthum*: Nacef 2015.

52 Stone, Mattingly and Ben Lazreg 2011: 248.

6 Zeugitana

One of the ways that Zeugitana, including Carthage and the Bagradas Valley, stands out from the other North African regions is the early date of its urban centres. Radiocarbon analyses have recently assigned dates of the tenth to ninth century BCE to *Althiburos* and the late ninth century BCE to Carthage.[53] A second and equally important difference between Zeugitana and other regions is the high number of settlements through the Punic, Roman, Vandal, Byzantine and Early Islamic periods. The total number of cities in Hanson's catalogue in Zeugitana is 50; even if some cities were not occupied in all of these periods, this number is more than one-third of all cities known from North Africa. One aspect of the density of settlement often seen as remarkable is the small rural territory each city possessed—estimated at as little as 80 km^2 on average.[54] Explanation for this density must take into account both the high level of urbanisation prior to the Roman conquest and the favorable climate including a high annual precipitation of approximately 500–700 mm of rainfall per year. The maximum extent of cities in *Zeugitana* was probably reached in the second or third century CE, but continued well into the fourth or fifth century.[55] At a few sites such as *Vaga* and Tunis, occupation even increased in the early Islamic period.[56]

Three field survey projects have taken place in Zeugitana, at Carthage, *Segermes* and *Thugga*. Early rural settlement corresponds to early urban occupation in the finds from the Carthage Survey (Fig. 10.5). There are 10 sites of the seventh to fourth centuries BCE and 41 of the third to second centuries.[57] From the first to the sixth century CE there is considerable rural settlement. The numbers show a decline in the middle of the seventh century and are reduced to six by the beginning of the eighth century.

The *municipium* of *Segermes* is located close to the border between Zeugitana and Byzacena. In a 150 km^2 area the Segermes Survey located sites of the Prehistoric (4), Punic (8) and Roman (220) periods (Fig. 10.6).[58] The main Punic settlements were both hilltops in the northeast portion of the study area, but by the second century CE the entire range of the valley was beginning to be exploited. The number of sites is at its highest in the early sixth century, although the investigators caution that this is partly a function of one

53 *Althiburos*: Sanmartí et al. 2012; Carthage: Docter et al. 2008.
54 Lepelley 1979: 46.
55 Lassère 1977; Lepelley 1979.
56 Fenwick 2013; Cambuzat 1986.
57 Greene 1992; Sycamore and Buchanan 2016.
58 Dietz et al. 1995; Ørsted et al. 2000.

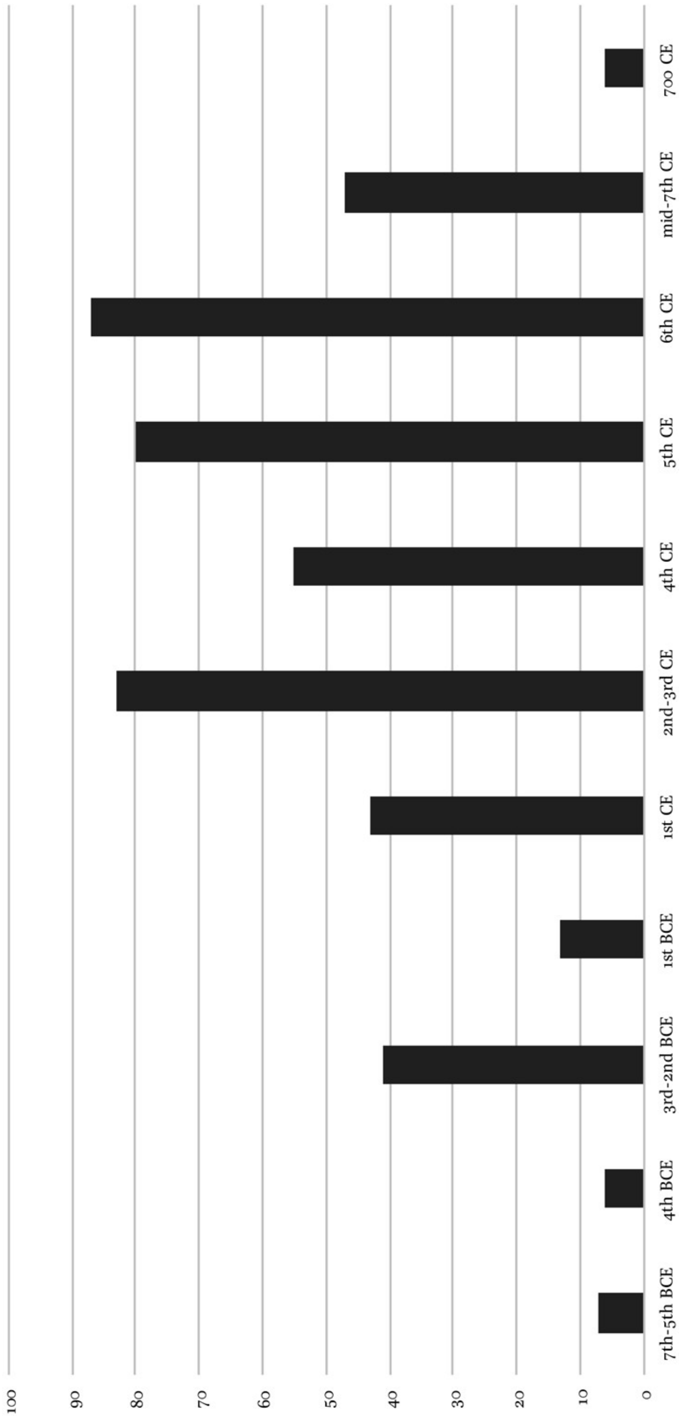

FIGURE 10.5 Carthage survey rural site numbers
AFTER GREENE 1992

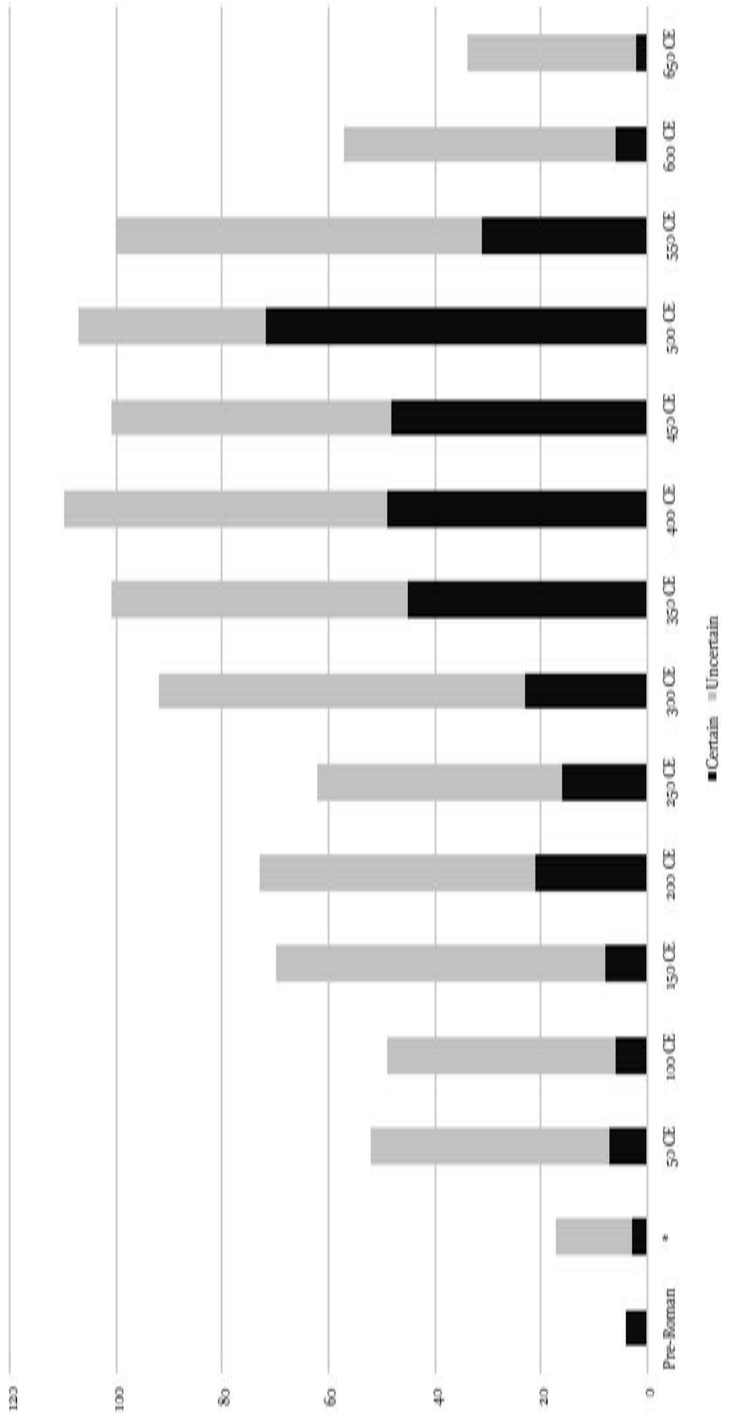

FIGURE 10.6 Segermes survey rural site numbers
AFTER DIETZ ET AL. 1995

closely-datable ceramic form: ARS 88.[59] In reality, it may be best to conclude rural occupation reached a peak over a longer period from 350–550 CE. A decline in rural settlement numbers began in the second half of the sixth century, and by 650, rural settlements had nearly disappeared.

Along the Bagradas river valley in the centre of Zeugitana an incredibly dense number of cities and rural sites has been located. Within an area of 371 km^2 the *Thugga* Survey counted 10 cities, 17 rural hamlets, 189 farms, 91 burials, 19 quarries, 8 fortified structures, 45 hydraulic works and 84 material concentrations.[60] Like the other interior regions we have seen, there is limited rural settlement prior to incorporation in the Roman Empire in 46 BCE after Julius Caesar's Africa campaigns (Table 10.2). Beginning in the Augustan period the number of rural sites rose from 24 to 137 by 250 CE. The number of sites remained relatively consistent for the next 300 years and then increased slightly between 550 and 650, before declining in the early Islamic period to 17. As near *Lepcis Magna*, *Cillium* and *Segermes*, the countryside of the Roman period was farmed intensively. The 708 stone elements for pressing and grinding recovered within the area of the *Thugga* Survey, including 262 counterweights, 200 anchorstones, 88 press-beds, 42 'donkey-quern' and 27 hand-quern elements indicate the emphasis on investment in new crops and crop-processing equipment.[61]

The massive port of Carthage was four to ten times as large as most other ports in North Africa, giving us a sense of the size of its operations.[62] Ostraca from the late fourth century CE allow for an understanding of the procedures involved in weighing and registering olive oil (and perhaps other goods) destined for export.[63] From the surviving records, much of the olive oil exported from Carthage appears to have arrived at the port in animal skins, either having travelled overland or been transported by sea, primarily from locations within Zeugitana. At the port, imperial officials transferred the oil from the skins to more durable amphorae. They first weighed empty amphorae, then filled them with oil and weighed them again, taking careful notes about each item. The amphorae were then loaded on board a ship for export. The other main products of Zeugitana appear to have been grain, wine, fish, and it is quite likely that at least the grain shipments from Carthage were treated in the same way. The

59 Dietz et al. 1995: 779–780.

60 De Vos Raaijmakers and Attoui 2013: 9–17.

61 See also, De Vos Raaijmakers 2013: 154.

62 Size of ports: Stone 2014.

63 Ostraca from Carthage: Peña 1998.

TABLE 10.2 *Thugga* survey rural site numbers

Period	Datable sites
Prehistoric (?–1st millennium BCE)	15
Libyan/Punic (8th BCE–146 BCE)	19
Late Republican (146 BCE–Augustan era)	24
Roman I (Augustan era–250 CE)	137
Roman II (250–430 CE)	142
Vandal (430–533 CE)	128
Byzantine (550–650/690 CE)	165
Islamic (8th–13th c. CE)	17
Modern	177
Total	295

DATA DRAWN FROM DE VOS RAAIJMAKERS AND ATTOUI 2013: 9–17

Carthage region produced a large variety of amphorae (Africana I, II and III, Ostia 59, Keay 27, 35 and 62, and perhaps others that we do not recognise yet). The dates of export of these products stretch from the first to seventh centuries CE.

7 Mauretania Caesariensis

Hanson's catalogue includes 21 cities in Mauretania Caesariensis, mainly along the coast, where they may have been founded by the sixth or fifth centuries BCE, as the discovery of pottery in early necropoleis attests. The two major cities in Mauretania Caesariensis, *Iol Caesarea*, a former capital of the Numidian kingdom, and *Tipasa* fall into this category; other large coastal sites such as *Icosium* date only slightly later.[64] Like many of the cities on the North African littoral, they demonstrate an admixture of Punic and local traditions. Expansion at a number of cities can be dated to the first century CE. This may coincide with Augustus' settlement of colonies of veteran soldiers at a number of pre-existing cities (*Rusguniae*, *Zucchabar*, *Aquae Calidae*, *Gunugu* and *Cartennae*) and the defeat of the client kingdom of Ptolemy in 40 CE.[65] Although far less

64 *Tipasa*: Lancel 1982: 746–754; *Iol Caesarea*: Leveau 1984: 11; *Icosium*: Camps et al. 1986: 450–453.
65 Plin. *NH* 5.20.

research has been conducted on cities in the interior, their origins date to the third century BCE in some cases and to Roman foundations in others. Many cities in Mauretania Caesariensis reached their greatest extents in the second and third centuries; several, like *Tipasa*, continued into the fifth century and beyond, while others, like *Iol Caesarea*, appear to have declined quickly in the fifth century.[66]

The Caesarea Survey, the earliest in North Africa, studied a 500 km^2 area in the territory of *Iol Caesarea*. The main conclusion drawn by Phillipe Leveau from the results was the identification of two different countrysides near the city. Within 10–15 km of the city, villages, agricultural villas (luxury villas were rare) and smaller rural sites existed in an 'urban economy', in which they were linked to the provisioning of the city. Approximately 100 olive presses were identified, including four 'oilery' buildings with multiple presses. Settlements in this area could be dated from the late first to the late fourth or early fifth century CE. Beyond 10–15 km or more from the city villas were not discovered, but villages and smaller rural farms were inhabited from the first century CE to the third or early fourth century CE. Leveau regarded these settlements as connected to local groups, but largely disconnected from an economy closely associated with Roman forms of exploitation.[67]

One of the intriguing features of Mauretania Caesariensis is the very limited evidence of surplus production for export. The presence of four harbours with artificial port structures in Mauretania Caesariensis (*Iol Caesarea*, *Tipasa*, Ras el Meskouta, Thalefsa)[68] is one indication that export production may have existed. However, no transport amphorae have yet been recognised as originating in Mauretania Caesariensis.[69] Instead, we must take seriously Leveau's suggestion that the hinterland of *Iol Caesarea* produced olive oil, wine and fish-sauce primarily for local markets, not Rome.[70] In this respect, the landscape of Mauretania Caesariensis looks far different from those we have seen before.

66 *Tipasa*: Sears 2007: 66–70; *Iol Caesarea*: Leveau 1984: 503.

67 Leveau 1984: 483–485.

68 Cf. Stone 2014.

69 Bonifay once thought the stamps 'M-palm-C' of Station 48 of the Piazza delle Corporazioni were produced in Mauretania Caesariensis (2004: 18–19), but now thinks they derive from Zeugitana or Byzacena on the basis of fabric analysis (Capelli and Bonifay 2016).

70 Leveau 2005: 84.

8 Conclusion

The growth of urbanism in North Africa is recognised by many scholars as one of the significant features of this territory within the Roman empire.[71] The scale of analysis that we have often employed to evaluate North Africa during this time has, however, occasionally obscured a number of the patterns that have been present. This study has demonstrated that by shifting the analytical unit to a smaller scale, it is possible to obtain a different picture showing concurrent 'ups and downs' in different regions.

This study has suggested that one methodology for assessing regional urban systems should be to examine the nature of rural settlement and of export production within their territories. With the exception of Carthage—one indication that it was *sui generis*—rural settlement did not begin until the second and first centuries BCE, and even then in only a small number of places, such as northern and central Tripolitania. In several landscapes, one cannot find the initiation of rural settlements until the first century CE. It is about this time that we start to detect export production, notably at Carthage, *Lepcis Magna* and on Jerba. The second and third centuries CE are a time of peak activity with established cities, dense rural settlement and export production in almost every North African landscape. What happens in the later Roman period also offers signs of divergence among different regions. While in Mauretania Caesariensis and Tripolitania rural settlements and export production decline rapidly in the fourth and fifth centuries, they are maintained elsewhere for a little longer. Next, in northern Tripolitania they begin to diminish in the first half of the sixth century. The landscape near *Leptiminus* in Byzacena sees a reduction in rural activity and export production in the fourth century, but a renewed phase of export activities begins in the sixth. By the eighth century, both rural settlements and export production have diminished. *Segermes*, close to the border between Zeugitana and Byzacena, and *Thugga* in the interior of Zeugitana, both decline between the mid sixth and mid seventh centuries. Only at Carthage, again, does rural settlement persist through the seventh century, in addition to export production.

This close inspection challenges to a certain extent the idea of late antique prosperity in North Africa, making it a more regional than universal phenomenon. It also presents North Africa as similar to other areas of the Mediterranean in which, in the Hellenistic (or Punic) periods, as well as in Late Antiquity, there are 'quiet landscapes' alongside 'busy countrysides'.[72]

71 Scheidel 2007: 75; Wilson 2011; Hanson 2016: 94–103.

72 Cf. Pettegrew 2007.

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CHAPTER 11

Micro-regional Urbanism: An Ancient Urban Landscape in Roman North Africa

Paul Scheding

1 Introduction*

Every city has an individual development in terms of its genesis, history and urban culture. This conjunction of circumstances generates a unique cityscape which tells us much about the social organisation and the understanding of urban space within a single settlement. That having been said, a city is not a self-contained nucleus. It is always integrated into a larger local and regional territory, a relationship which is much more complex than just the interaction of rural production and urban consumption.[1] In the Mediterranean, especially in the Roman Empire, this connectivity was not restricted to the immediate hinterland. The city of Rome and the organisation and dynamics of each single province had a tremendous impact on the culture of any one single city.[2]

To arrive at an interpretation of the cityscape, urban armatures and urban spaces,[3] a variety of different approaches has been developed in archaeology,[4] and these have been honed and improved by the interdisciplinary exchange between classical studies and modern sociology.[5] On a methodological level, one way of examining cityscapes, analyses cities as products and containers of human behaviour.[6] The inhabitants were actively shaping the city by designing new urban spaces in it, stages on which actors and audience could interact.[7] Nevertheless, the builders were not completely free in their decisions. The construction of new buildings in any existing cityscape was determined by socially

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1 Bowman and Wilson 2011: 7.
2 Laurence and Trifilò 2015: 99–122.
3 MacDonald 1986.
4 Different approaches summarised by Haug 2003: 11–27.
5 See Löw 2008: 238.
6 See, for example, Hölscher 1999: 12; Haug 2003: 27; Heinz 2004: 123–142; Creighton 2006: 91 ff.; Revell 2009: 10–15; Laurence et al. 2011: 4–6.
7 Zanker 1994: 259 ff.

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negotiated ideas about values, functions and representational forms of architecture and urban space.[8] It would have been out of the question for anyone wanting to erect a building to offend against these collective 'ideas of the city',[9] if they wanted to represent their architectural contribution and themselves in the best possible light. This two-way process of 'shaping the built environment' and 'being shaped by the built environment' allows the cityscape to be interpreted not just as a result of an individual decision but as part of ancient city life and culture, *urbanitas*.[10]

This process of a self-defining urban culture did not stop on the outskirts of a city. Citizens travelling to Rome or other cities introduced new ideas of architecture and urbanism in their hometowns and the hinterlands of these towns, stimulating inner-city reflection. This was never a simple copying process which expressed itself in attempts to build a small-scale Rome,[11] but rather an incorporation of specific urban aspects which not only responded to the perceived needs of the inhabitants, but also represented certain values to them. Any interpretation of a particular cityscape has to take into account interactions operating at various levels—city, region and rural hinterland—all of which had an impact on the idea of 'what a city should be'. Therefore, a micro-regional approach to examining cities can enlarge our understanding of the formation of urban culture itself.[12]

Other archaeological topics have already made us well aware that, besides chronological developments in style, certain 'regional styles' can be observed. The examination of ancient objects taking their micro-regional singularities into account is not a particularly new approach in classics. German terms like *Landschaftsstil* or *Kunstlandschaft* define stylistic characteristics in sculpture, paintings or architecture which can be observed in a geographically defined landscape.[13] This method opens up the study of different but simultaneous stylistic developments in distant regions, without labelling these *a priori* antithetical. One well-known example concerns the differences between Greece and Asia Minor in Archaic sculpture.[14] In this case, the term *Landschaftsstil* has helped to interpret styles which possess certain regional qualities as having

8 Schalles and von Hesberg 1992: 392.

9 Creighton 2006: 70 ff.

10 See Busch, Lipps and Griesbach 2017. This ancient term was used by Cicero and Quintilian to describe what city life was comprised of. It encompassed not just monumental buildings but also urban living; see Busch et al. 2017: 3.

11 Schalles and von Hesberg 1990: 392.

12 See Schneider 2017, for a comparison of two micro-regions in southern Spain.

13 Raeder 1993: 105–109.

14 See Walter-Karydi 1987: 10 ff.

developed in the context of particular geographical regions. However, useful though it is, this perspective has rarely been extended beyond the study of objects and applied to ancient cityscapes.[15]

The idea that the Mediterranean must be treated as a compilation of interconnected micro-ecologies or micro-regions was advocated by Horden and Purcell.[16] Their view that ancient history should be studied in individual but connected micro-ecologies is controversial.[17] One common point in the various critical responses has centred on their assertion that neither route nor town is a particularly helpful category for examining ancient Mediterranean history.[18] This rejection of the city as one of the central ideas and loci of civilisation presents many archaeologists and historians with a real challenge. Answering their critics, the authors have amended their argument by insisting that "towns should not be treated as *a priori* a special case, but should be blended into a larger field of investigation (to be called, e. g. settlement studies)".[19]

One promising approach might be to turn Horden and Purcell's rejection of the importance of the city on its head by analysing cities and their hinterland in one single micro-region as a 'special case' alongside others—that is, by studying and comparing cityscapes within a particular micro-region. In such an approach specific urban and architectural characteristics are examined in their local context to reach an understanding of the cities, their various cityscapes and the people living in them as an interdependent micro-regional system. Opposing a dogma which demands the interpretation of a well-developed city and an underdeveloped countryside in matters of urbanisation,[20] the approach of this paper focuses on the interpretation of urban phenomena from the perspective of interconnectivities between city, hinterland and micro-region. This does not mean that the different levels represented by city and countryside are negated but simply stresses that this relationship should not be interpreted *a priori* as separate in their understanding of urbanity and the cityscape. The examination of ancient cities itself is fraught by a major problem: what is the city in a particular period of history?[21] What constitutes a city must always be

15 See, for example, Raja 2012.

16 Horden and Purcell 2000. Against the approach of Braudel's *longue durée*, see: Concannon and Mazurek 2016: 3 ff.

17 Fentress and Fentress 2001: 203–219; Shaw 2001: 419–453.

18 Horden and Purcell 2000: 100.

19 Horden and Purcell 2006: 370.

20 Laurence and Sears 2011: 5.

21 How to define the ancient city is a long-term discussion; Kolb 1984: 15; Lang 1999: 5; Mertens 2000: 230; Haug 2003: 11. Kolb 1984: 15, lists the following criteria for distinguishing a 'city' from other types of settlement: (1) a topographically continuous settlement

specified within a particular regional context,[22] meaning that the same question can be answered differently for different historical periods when the development of urban landscapes is thrown into the mixture.[23] Precisely for this reason this paper will not examine the development of an urban landscape but the connections between cityscapes and a micro-regional urban idea during a specific period of Roman imperial history.

2 An Ancient Conurbation in Africa Proconsularis

At the beginning of the third century CE the Roman province of Africa Proconsularis was one of the most urbanised regions in the Roman Empire.[24] Hundreds of cities, towns and settlements in modern Tunisia, Algeria and Libya are famous for their well-preserved archaeology. The northern parts of the province differed considerably from the southern areas in terms of geography, climate and land use and also in terms of the number of cities.[25] One important distinction concerns the level of urbanisation: while the south had a few scattered cities, a dense urban landscape existed in the northern parts of the province. In the hinterland of Roman Carthage, a dense concentration of monumentalised cityscapes was located in a very small area (Fig. 11.1).[26]

Just a few miles separated cities like *Thubursicu Bure*, *Thugga* or *Uchi Maius*, enabling the inhabitants to taste urban cultures in different but comparably developed cities within the space of a day. Most of these cities in the region presented a monumental cityscape.[27] The city of *Thugga*, for example, had a *forum*, several baths, a theatre, a circus, arches, a market-building and more than ten sacred buildings.[28] This was nearly the same number of urban

which operates as an administrative entity; (2) a population of at least 1,000 as a precondition for (3) segregation of working processes and social distinction; (4) diversification of monumental buildings; (5) an urban lifestyle and (6) a central role for a sizeable hinterland. In German archaeology this approach has been accepted by Alto Bauer 1996: 1 ff.; Lang 1999: 5; Hölscher 1999: 12; and Mertens 2000: 230.

22 What counted as a city in Roman Spain might have only been a village in Asia Minor; see Bowman and Wilson 2011: 6.

23 A settlement could begin as a village, then develop into a large city and subsequently decline again to a village; see Mertens 2000: 231.

24 See Aounallah 2010: 74, Fig. 3, and the maps in Hobson's contribution to this volume.

25 Hobson 2015: 6–10; Shaw 1995.

26 This territory also was an administrative entity called *pertica Carthaginesium*, see Salama et al. (2010: 56–59), and Scheding forthcoming.

27 See Jouffroy 1986.

28 See Saint-Amans 2004; Aounallah and Maurin 2016.

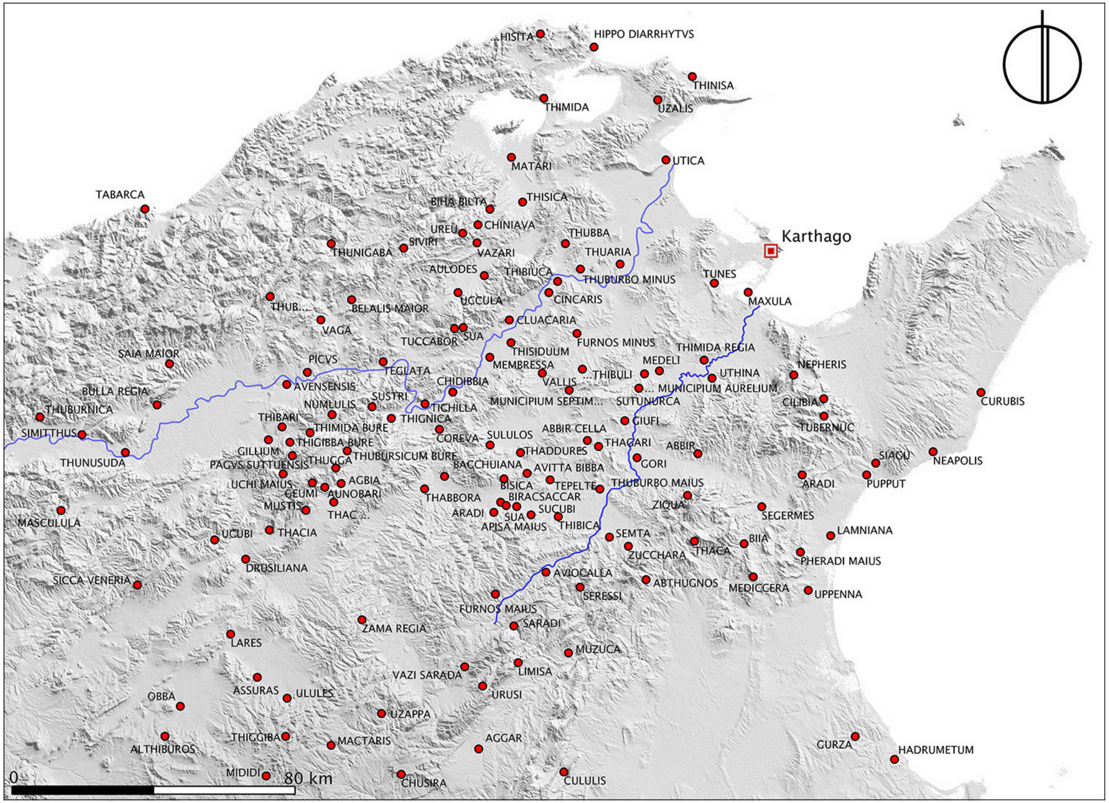

FIGURE 11.1 Map of the Micro-Region, hinterland of Roman Carthage (modern Tunisia) based on a SRTM Data

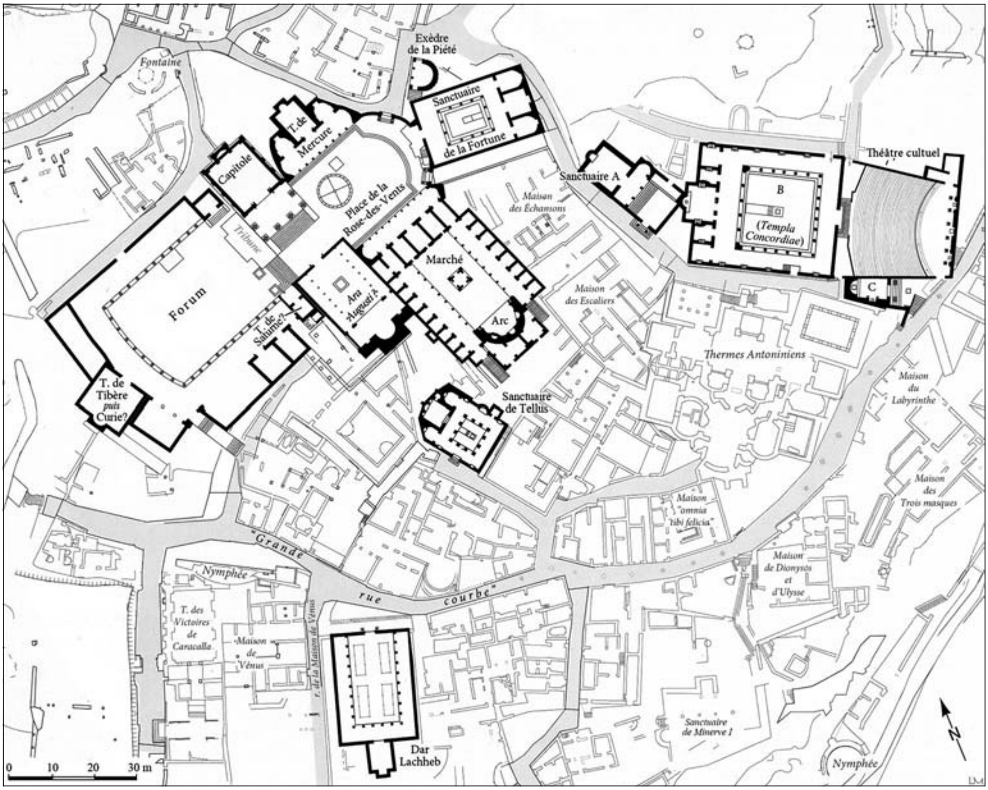

FIGURE 11.2 Map of the forum and the surrounding areas in *Thugga*
AFTER AOUNALLAH AND GOLVIN 2016

amenities which graced an important inland city such as *Thamugadi* (Timgad). However, Timgad covered about 50 ha and had a population of approximately 10,000, while *Thugga* had more like 25 ha and had perhaps fewer than 5,000 inhabitants.[29] Another important difference between these cities was their urban environment: Timgad was the only urban centre in a mono-centric region, whereas *Thugga* was surrounded by comparable settlements and formed part of a polycentric urban area.

Polycentric urban regions, city areas without a single dominant city, can be described by the modern term ‘conurbation’, which was coined as a neologism by Patrick Geddes in 1915.[30] This term implies a region of economic power with region-specific social dynamics and a specific regional urban culture. Geddes’

29 Wilson 2011: 174–176; Lézine 1969.
30 Geddes 1915: 34–38.

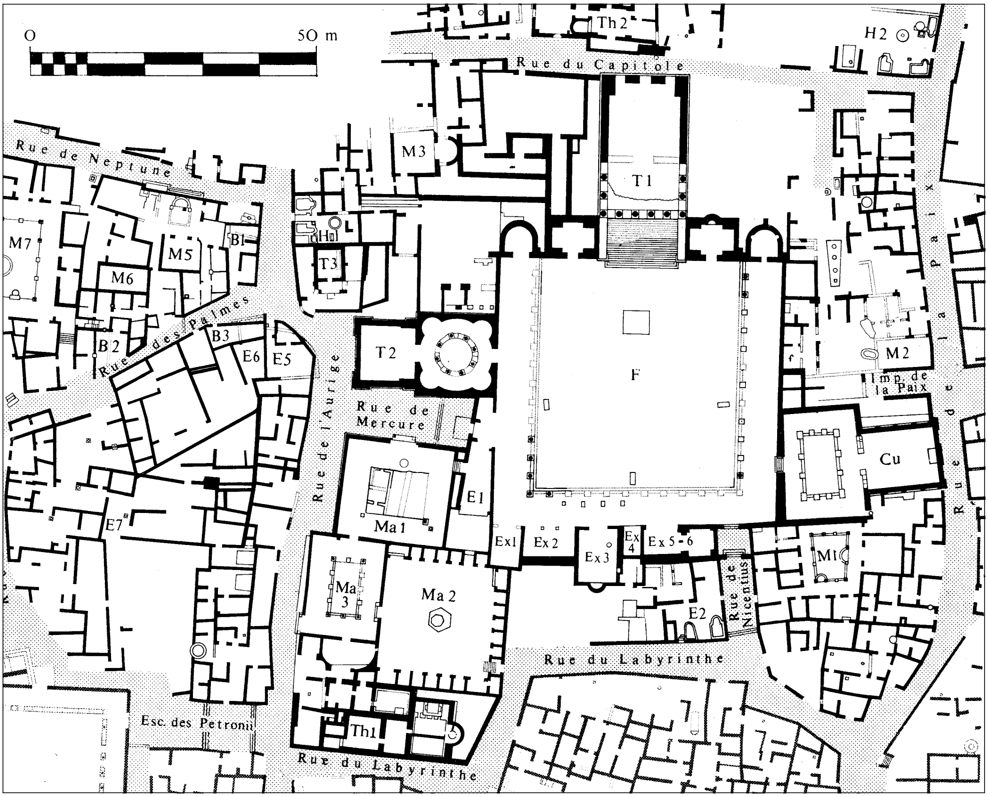

FIGURE 11.3 Map of the forum and the surrounding areas in *Thuburbo Maius*
AFTER ALEXANDER ET. AL. 1980

work on Midlanton (England) and the Rhine-Ruhr-Area (Germany) shows that this situation worked as a kind of catalyst of regional development. Similarly, an examination of the hinterland of Roman Carthage around the year 200 CE reveals that this area had a very dynamic regional urban system.[31] Using the cities of *Thugga* and *Thuburbo Maius* around the year 200 CE as case studies, allows us the possibility of demonstrating that the existence of an urban cluster in a particular region altered townscapes and cityscapes in a very specific way.[32]

The ancient city of *Thugga* (Dougga) (Fig. 11.2), in the north of modern Tunisia, had been a pre-Roman settlement located on the slopes of a moun-

31 See Scheding forthcoming.

32 In Scheding 2019 a wider set of case studies is examined, including Thignica, Mustis, Uchi Maius, Cincaris and Numlulis.

tain in the vicinity of the Oued Khalled Valley.[33] Under the Numidian kingdom, *Thugga* rose to be one of the central settlements of the region.[34] It may also have enjoyed the status of a royal city. After the Roman occupation of this part of Africa in 46 BCE, *Thugga* was composed of a *civitas* and a *pagus*.[35] In 205 CE these two administrative entities were merged into a single *municipium*.[36] *Thuburbo Maius* had also been a pre-Roman settlement, located not far east of *Thugga* on a plain called the 'plaine du Fahs' (Fig. 11.3).[37] It is known to have been a 'Libyan city' which was integrated into the territory of Punic Carthage even before the Roman province had been established. *Thurburbo Maius* still was a *civitas* during the reign of Hadrian,[38] but became a *colonia* under Commodus at the end of the second century CE.[39]

3 Micro-regional Cityscapes in Africa Proconsularis

A first glance at the town plans of *Thugga* and *Thuburbo Maius* shows a 'diffuse' organisation of the urban space. Neither city had a regular street grid, but presents an organically grown cityscape based on an older pre-Roman settlement.[40] Around 200 CE the main public plaza surrounded by public buildings, the *forum*, was situated in the centre of both settlements.[41] Apart from this urban core, there do not appear to have been any other central public foci, like main streets or other plazas towards which public buildings were oriented. As a matter of fact, both at *Thugga* and in *Thuburbo Maius* the public buildings were randomly distributed all over the city. This observation applies not only to the large number of sanctuaries in both cities, but also to baths and other public buildings. So conspicuous is the tendency to random scattering that it could be said to be a specific element of the cities in the hinterland of Carthage.[42]

33 Khanoussi 2002; Aounallah and Golvin 2016.
34 The city of *Thugga* was already mentioned during the campaign of Agathokles in 310–307 BCE: Diod. 20.57.3–4.
35 Saint-Amans 2004: 56–60; Ben Akacha 2011: 613–627.
36 *ILAfr* 588.
37 Alexander et al. 1980.
38 *ILAfr* 244.
39 *AE* 1912, 182.
40 Scholars of North African urbanism have often focussed on a few cities with a rectangular street-grid and labelled this layout Roman rather than African. See for example Laurence and Sears 2011: 160.
41 *Thugga*: Aounallah and Maurin 2016: 246, Fig. 8; *Thuburbo Maius*: Merlin 1922: 22–25.
42 Another good example is the city of *Thignica*, modern Ain Tounga, 10 km north-east of

Another striking aspect of these cities is the flexibility shown by the urban community in assigning spaces formerly occupied by alleyways and streets for the erection of new buildings. Around 200 CE public and private buildings were enlarged by utilising the space available along public streets. One illustration is the temple of Pluto in *Thugga*, which was built during the second century CE and extended in the Severan period.[43] In order to enlarge the rectangular courtyard, the alleyway to the east of this temple-complex was incorporated into the *temenos*, which meant that the street was considerably narrowed. Hence the monumentalisation of the sanctuary imposed a restriction on public urban space.[44]

A comparable situation is found in market-place No. 3 in *Thuburbo Maius*. After its erection in the late second and early third century CE the north-western corner of this building blocked parts of the main thoroughfare of the city.[45] This is a very interesting phenomenon because the urban community must have acquiesced in the limitation of their former public space: apparently the enlargement of inner plazas and buildings was more important to the inhabitants and the urban elite than the width of streets in the city. In towns like *Thugga* or *Thuburbo Maius* urban development does not seem to have included an expansion of the city, or an enlargement of open public plazas and streets. Other examples within the hinterland of Carthage suggest that this situation was far from uncommon.[46]

Given the willingness to sacrifice public space to allow the erection or enlargement of these buildings, it is striking that most of them, like the temple of Pluto or the market in *Thuburbo Maius*, would not have been easy for a foreign visitor passing along the street to discover, because they were surrounded by high walls with narrow entrances. It does not seem to have been considered important to front monuments onto the main streets or the public

Thugga. Even though the settlement has not been as thoroughly excavated as *Thugga*, all known public buildings are pretty well distributed throughout the city. Ben Hassen 2006.

43 Saint-Amans 2004: 368–370, Fig. 92; Golvin and Khanoussi 2005: 79–95, Figs. 89–118.

44 Golvin and Khanoussi 2005: 92 and 94 ff., Fig. 117. See Road R1 and the extension of the *temenos* MS2.

45 Alexander et al. 1980: 15–19, Fig. 5.

46 The less well-known cities of *Cincaris* or *Thignica* seem to have had comparable cityscapes. For *Cincaris* see Duval and Lamare 2012: 231–288. *Thignica*, also a pre-Roman settlement, became a *municipium* in the late second century CE. It also boasted numerous monumental public buildings, like an amphitheatre and theatre, baths and temples. See Ben Hassen 2006. Situated on the lower slopes of the Tounga hills, it is not possible to identify any kind of system or structure, like a major street or street-grid along which the public buildings inside the cityscape would have been constructed.

spaces of the city. The upshot was that the monumental architecture of most of these buildings was not visible, either from the *forum*-plazas or from the streets of the city. Instead, narrow entrances gave access to inner open spaces which were framed by monumental façades and shady porticos. Only after passing through these gates did the luxury of the architectonic features become palpable. The temple of Mercury in the *forum* of *Thuburbo Maius*, built in 211 CE,[47] had a circular portico clad with expensive marble ornamentation which was not visible from the plaza. These small open spaces were added to temples, and to theatres (like the semi-circular *xystus* in *Thugga*, which was mentioned in a building inscription[48]), baths or even erected as single buildings, like that known as 'the Hall of the Petronii' in *Thuburbo Maius*.[49] Simplicity in the presentation of the monument towards the streets and plazas was remarkably contrasted with spectacular architectonical decoration within. In addition to being equipped with shady porticos, the inner open plazas were furnished with water basins or flowerbeds, as in the case of the so-called Temple of Dar Lachheb in *Thugga*.[50] Inside the sanctuaries especially, trees and flowers created a quiet, green space in which the inhabitants of the city could gather. The variety of these closed spaces and the luxury of their interiors reveals how important they were.

These observations about the hinterland of Roman Carthage grow even more significant when settlements like *Thugga* or *Thuburbo Maius* are compared with cityscapes outside the dense urban cluster to which these cities belonged. The organisation of the space in the city of *Bulla Regia*, for example, differed sharply from that in *Thugga* or *Thuburbo Maius*.[51] Situated in the so called *campi magni* in the west of modern Tunisia (Fig. 11.1),[52] *Bulla Regia* was also a pre-Roman settlement which already had a monumental cityscape at the beginning of the third century CE. Unlike *Thugga* and *Thuburbo Maius*, however, *Bulla Regia* was the only urban centre in this area. Archaeological research has revealed the existence of four major open public spaces in *Bulla*: the *forum*, two so-called 'esplanades' and a large plaza in the western part of the excavated settlement, generally referred to as 'Plaza A' (Fig. 11.4).[53]

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47 Lézine 1968: 17, Pl. 4, Figs. 1–2; Eingartner 2005: 142; Wesch-Klein 1990: 203 after *CIL* VIII, 12366.

48 *CIL* VIII 26606. A *xystus* or *xystos* was a terraced building or promenade. The *xystus* is mentioned by Vitr. 5, 11, 4; see also *DNP* XII 2, 2003: 654.

49 Alexander et al. 1985: 2; *ILAfr* 271.

50 Aounallah and Maurin 2016: 440.

51 Chaouali 2010.

52 Lassère 2015: 457–459.

53 Broise and Thébert 1993: 367, Fig. 364.

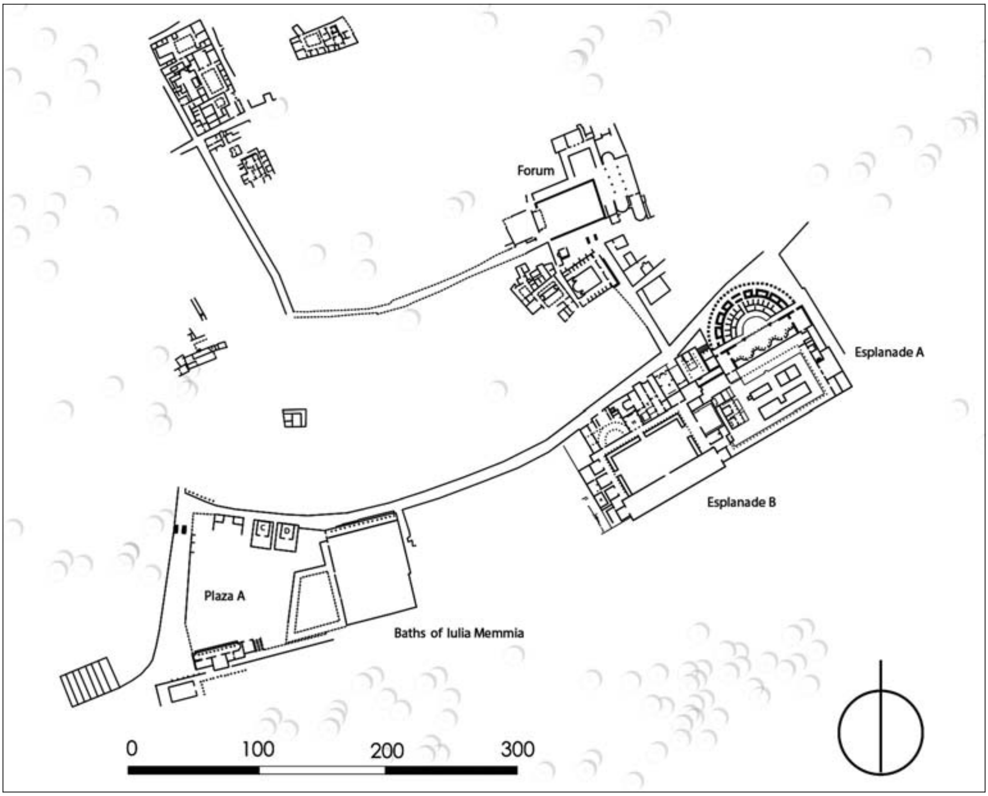

FIGURE 11.4 *Bulla Regia*. Region of plaza A, esplanades A/B and the forum
BASED ON BROISE AND THÉBERT 1993

The addition of one or even more new large plazas to existing *fora* in a city, the so-called 'polycentrism', is a well-known phenomenon in North African in the second and third centuries.[54] This is documented for cities such as *Mactaris*, *Cuicul*, Carthage, *Lepcis Magna*, and also for *Simitthus*. These new *fora* served multiple functions and enhanced the amount of public space, which could be interpreted as reflecting an increased need for public open spaces.

In contrast to the spatial arrangements which can be observed in *Thugga*, all public buildings surrounding Plaza A in *Bulla Regia* opened onto this area. Neither Temple C nor Temple D was surrounded by a portico but both were

54 For an interesting discussion of the so-called '*Polyzentrismus*' of public plazas in North Africa see Kleinwächter 2001. The cities covered in this study include Carthage, *Cuicul*, *Thubursicum Numidarum*, *Mactaris*, *Lepcis Magna*, *Pheradi Maius* and *Calama*. All of these cities are located outside the densely urbanised region which is the focus of the present article.

clearly visible from the plaza.[55] All of these places were connected by a large thoroughfare up to ten metres wide. Nearly all of the known public buildings in Roman *Bulla Regia*, the theatre, the baths of Iulia Memmia, the temples and the market, were connected to one of these main streets or plazas. The presentation of the architecture also seems to be different: most of these buildings were embellished with monumental façades or columned gateways and were highly visible. In *Bulla Regia* a portico gave access to the baths of Iulia Memmia, thereby connecting this building to one of the central streets of the city.[56] This is very different from what are known as the "summer baths" in *Thuburbo Maius*, which had to be accessed through a small door which opened onto what must have been no more than a narrow alleyway.[57]

Another striking example is the small city of *Cuicul*.[58] Situated on a triangular plateau in the mountains in the province of Numidia (modern Algeria) and with no other large city in its immediate vicinity, *Cuicul* became an important trading city as it was situated at a point at which two major overland trading routes crossed. At this crossroads, in response to the increased requirement of public space, a new monumentalised *forum* was created at the end of the second century CE.[59] From the epigraphic evidence we know that large granaries were also built at this time, to store the produce of the prosperous rural area around *Cuicul*.[60] Looking at the way in which public buildings were integrated into this new plaza, a pattern similar to that at *Bulla Regia* emerges. The building known as 'the temple of the imperial family' was erected under the Severan dynasty.[61] The monumental staircase descending towards the *forum* created a kind of second podium for this temple. This situation is very similar to that at *Bulla Regia*, but very different from the patterns found at *Thugga* or *Thuburbo Maius*.

From the excavated archaeological remains it can be inferred that the organisation of urban space in cities within the hinterland of Carthage, the 'conurbation', differed from that of cities which were situated beyond it. The excavation at *Bulla Regia* shows that cities of similar origin which did not belong to this urban landscape could develop a very different cityscape.[62] We have no evi-

55 In the *forum* of *Bulla Regia* an existing *temenos* wall of the temple of Apollo was destroyed to open up the temple and enlarge the open *forum* area: Murer 2017: Fig. 42.

56 Murer 2017: 116–118, Fig. 44.

57 Thébert 2003: Fig. 59.3.

58 Février 1968.

59 Kleinwächter 2001: 75 ff., Fig. 14.

60 Carre 2011: 26.

61 Eingartner 2005: 98 ff. and 116.

62 *Bulla Regia* and *Thugga* were pre-Roman settlements (perhaps both royal cities in the

dence of the existence of any open public plaza other than the *forum* in cities of the hinterland of Carthage.[63] Instead a clear preference for enclosed public spaces can be observed in the cityscapes of these cities.

4 Micro-regional Cityscapes and Micro-regional Patterns of Economic and Social Interaction

A very important factor in any analysis of the cityscapes in the hinterland of Carthage is that nearly all of the single public buildings in this area were financed by private benefactors.[64] This was a major divergence from the larger cities in the interior districts of North Africa like *Cuicul* or Timgad. Duncan-Jones has shown that most of the public buildings of Timgad were financed by the whole city community.[65]

Several authors have convincingly argued that Africa experienced a significant economic growth during the second century CE as a consequence of its flourishing agricultural sector and the export of various products. However, archaeological surveys conducted in Tunisia have identified significant differences in the organisation of production on the estates in different geographical zones.[66] Some excavated production sites for olive oil and wine in the hinterland of Carthage covered a considerable area but seem to have emerged gradually. This rural pattern contrasts sharply with the numerous colossal, planned constructions in the countryside of southern Tunisia.[67] Scholars like Gsell and Kehoe have shown that the southern and western parts of Africa Proconsularis were dominated by large estates,[68] run by single landowners using slave labour but recruiting temporary workers at harvest time. This was a marked divergence from the pattern prevailing in the northern parts of the province.

Numidian kingdom) and *Thuburbo Maius* shared a similar topographical situation. Even if this fact might possibly be a result of the known archaeological record, it does seem that *Thugga* and *Thuburbo Maius* had many more public buildings. It would be an unlikely assumption that the urban community in *Thugga* or *Thuburbo Maius* would have had more financial means than those in *Bulla Regia*.

63 Jouffroy 1986: 441. The cities with more than one public plaza in Africa Proconsularis were Carthage, *Bulla Regia*, *Sufetula*, *Gigthis* and *Meninx*.

64 Briand-Ponsart 2003: 254 n. 81.

65 Duncan-Jones 1990: 182 ff.; Briand-Ponsart 2003: 254 n. 81.

66 See Matthew Hobson's contribution to this volume.

67 Hobson 2015: 81, Fig. 3.15.

68 Kehoe 1988; Gsell 1932: 397–415.

Seven important agrarian inscriptions provide information about the conditions of tenure on estates in the northern half of the province.[69] The regulations recorded in these inscriptions not only allowed free tenant farmers to bring unused land on the estates under cultivation, but also specified a period of exemption from the rent for newly planted crops in accordance with a law of unknown date, the *Lex Manciana*.[70] These texts reveal a great deal about a very dynamic relationship between the *coloni* (the tenants) and the *conductores*, a kind of middlemen between the landlord and the tenants.[71] The upshot was that the estates were divided into small parcels of land, which were occupied for long periods by families of tenant farmers. Hence the northern part of Tunisia around 200 CE was dominated by small estates owned by city communities, local families and imperial estates all of which were divided into small farms.

The survey work by De Vos has located many of these estates in the region of *Thugga*.[72] Thanks to inscribed boundary stones and tombs found near the farm buildings used for oil-pressing and wine-making, we know the names of the owners of these estates at certain periods (Fig. 11.5). They were part of the local urban elite of *Thugga*, among them the families of the Pacuvii or Gabinii, who were responsible for constructing many of the monumental public buildings in the city. Compared to the amounts of money the members of these families were spending on public benefactions, their properties appear to have been extremely small. For instance, we know from the epigraphic record that members of the Gabinii, one of the most powerful families in *Thugga*,[73] constructed large temple-complexes which cost more than 50,000 HS, but their estate was only roughly 20 ha.[74] Moreover the facilities built for wine-making or oil-pressing were very small and were erected to process the yield of just this one estate.[75] These facts have led De Vos to suppose that the Gabinii had other kinds of income founded on a well-organised social network in the region. For instance, she postulates that the family was involved in the distribution of limestone from the quarries near *Thugga*.[76] It also seems almost inevitable that this family was part of the complex and dynamic relationship between the *conductores* and the *coloni*. We do not have any epigraphic evidence which shows that

69 de Ligt 1998–1999.
70 Scholl and Schubert 2004: 79–84. See also Schubert 2008: 251–275.
71 Kehoe 1988: 69.
72 de Vos 2013.
73 Saint-Amans 2014: 119 ff.
74 de Vos 2013: 194, Fig. 6.5; instead of 0.2 ha read 20 ha.
75 de Vos and Attoui 2013: 45 ff., Pl. 19. The square building measures about 52 Roman feet.
76 de Vos 2013: 194.

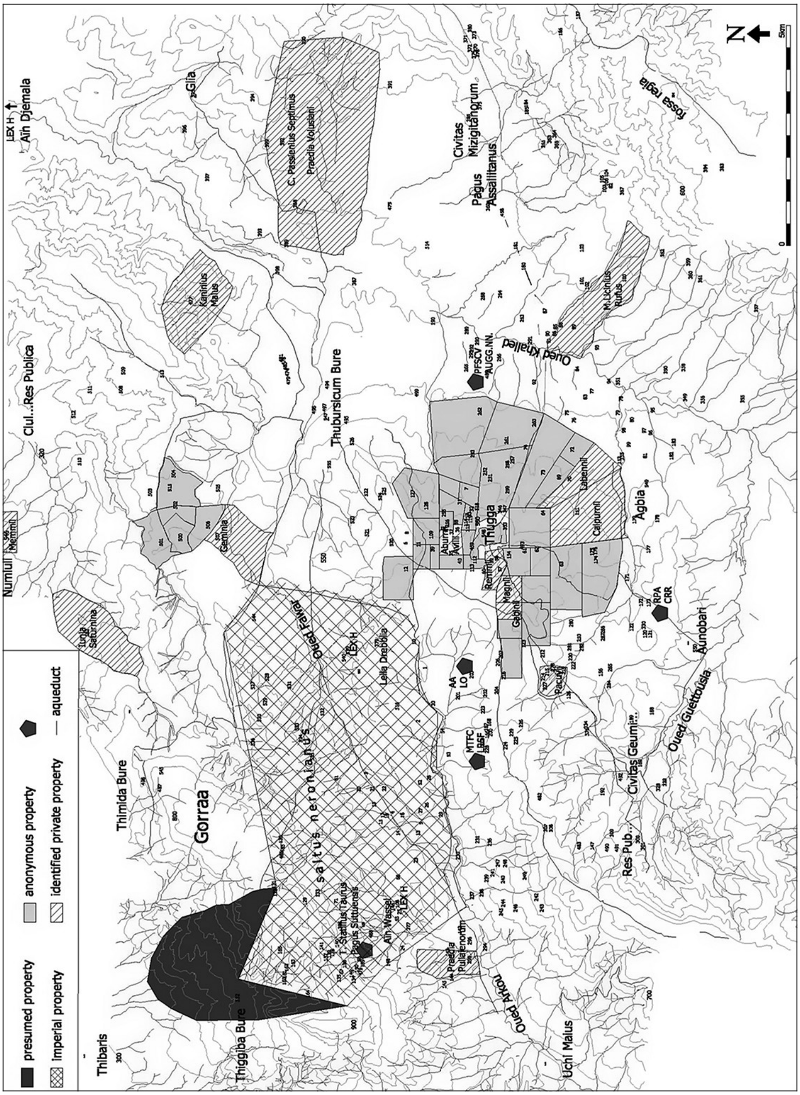

FIGURE 11.5 Map of the surveyed area around *Thugga*, northern Tunisia
AFTER DE VOS 2013

members of the local elites were actually in charge of running the economy as *conductores* but there can be no doubt that it would have been very profitable for them to undertake that role.

In this context, the plinth of a statue of Aulus Gabinius Datus—a member of the *gens Gabinia*[77]—which was erected inside the building known as 'Temple B' in *Thugga* is important (Fig. 11.6). It is quite possible that this temple was built by the Gabinii in the second century CE.[78] The inscription informs us that two of the chief tenants of an imperial estate, who are referred to as the *conductores praediorum regionis Thuggensis*, erected the statue to thank Aulus Gabinius Datus for his service.[79] We have no idea what this kind of service might had been, but it would seem feasible to assume that it was linked to the work of the *conductores* in the *Thugga* region. The inscription suggests that the *conductores* established informal connections with the local authorities, using their social networks in the region to increase their income.[80] We have to assume that there was a very high level of connectivity between urban and rural interest groups, and civic administrators and local families, and that this connectivity had a specific value for these elites who could benefit from it financially.

The inauguration of a statue of Aulus Gabinius Datus in a public building erected by members of the *gens Gabinia* demonstrates that the inner plazas of these public buildings played a part in the individual representation of the urban elites in the city. The use of public buildings to create a space in honour of a family member was a very common practice.[81] To ensure that these spaces were often frequented by the city community, festivities were instigated during the inauguration. The large amount of epigraphic evidence in Africa has shown that the erection of a public building was often the occasion for banquets and gift-giving, dedicated to only a select group among the broader urban population, like the members of the town council.[82] It can be assumed that the small, enclosed plazas of the cities of northern Proconsularis, and their surrounding porticos, were used—besides their main purpose—as gathering points for these urban collectives. The buildings were in any case important loci of com-

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77 Khanoussi and Maurin 2000: 76–80; de Vos and Attoui 2013: 45ff., cat. no. 047; Gilhaus 2015: 276–279.

78 Saint-Amans 2004; Aounallah and Golvin 2016: 478–522. Against this interpretation Raming and Ritter 2002: 87–105.

79 *AE* 1921, 24.

80 Hobsen 2015: 78.

81 Gilhaus 2015; Scheding forthcoming.

82 Wesch-Klein 1990: 35, n. 89.

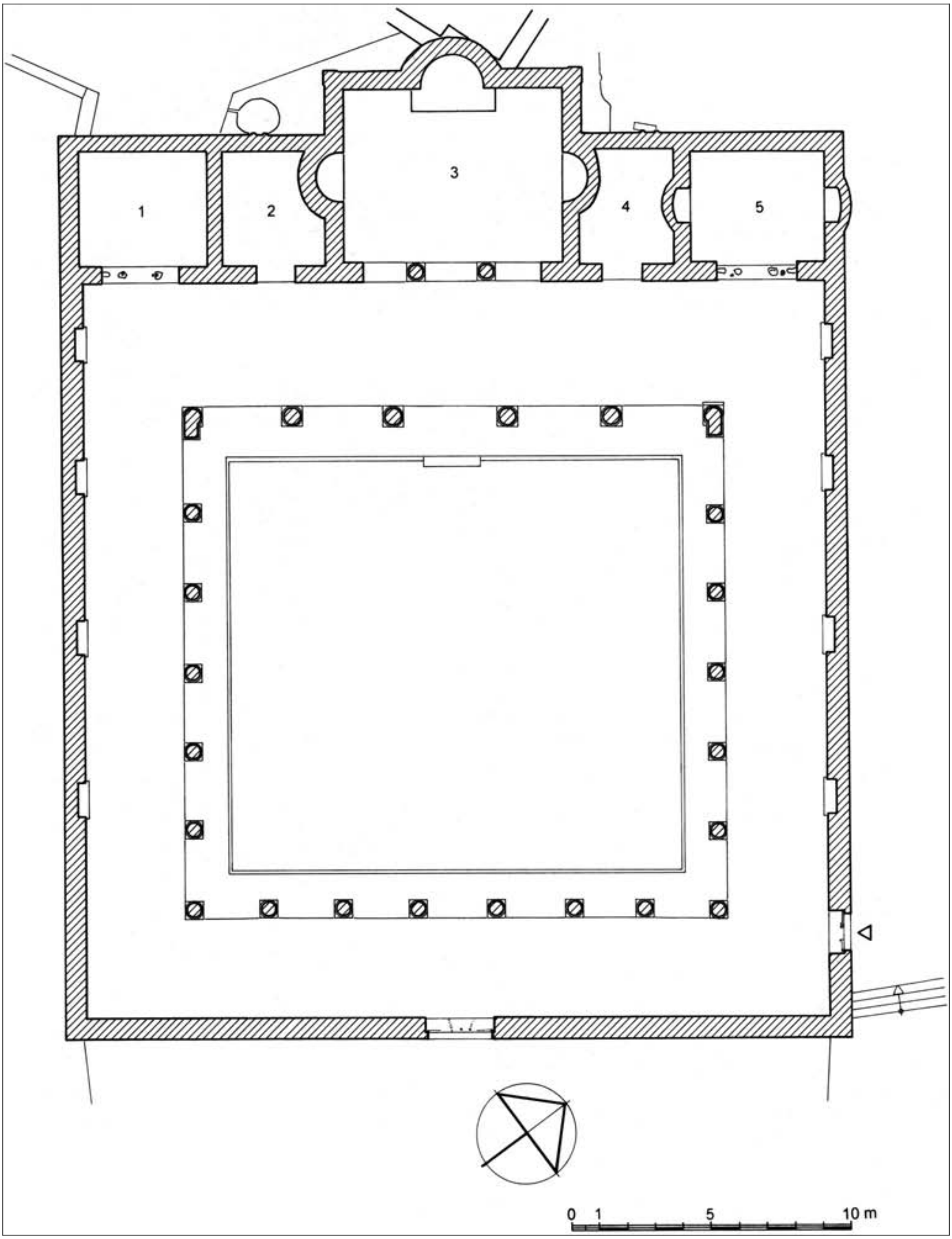

FIGURE 11.6 Temple B, in *Thugga* (Tunisia)
AFTER RAMING AND RITTER 2002

munication in the city. Connectivity and therefore communication between the different groups like the powerful families,[83] the local authorities,[84] the *magistri* of groups of *coloni*[85] and sacred organisations,[86] became an indispensable element in the success of every individual group. As we have seen, inter-group cooperation grew increasingly important in the different fields of economic life.

Nevertheless, the importance of connectivity was not limited to the city and the surrounding areas. We know from the inscriptions that members of the urban elite, like the Gabinii of *Thugga*, not only held urban magistracies in their home city, but were also present in the provincial capital of Carthage. From the beginning of the second century CE until the beginning of the third, more than ten people from the cities inside the northern 'conurbation' who were also priests or members of the *ordo* of Carthage can individually be identified.[87] One example is the son of Aulus Gabinus Datus, who was a member of the *quinque decuriae* of Carthage and simultaneously patron in his birthplace *Thugga*.[88] This suggests that he did not spend all his time in his hometown, but also lived and worked in the provincial capital. Given the monumental cityscape of Carthage and the power it exuded over the province, it is easy to understand why he would have preferred to remain in Carthage rather than spend his entire life in the small city of *Thugga*. By this time people like Gabinius Datus and their families had achieved the highest social status in their hometown, and many public buildings and statues were erected to honour their success. Obviously their range of social interaction as well as their understanding of urbanism and public architecture was highly defined by the micro-region: the city, their properties and their offices in the provincial capital.[89]

83 See De Vos 2013: 194.

84 During an inauguration of a privately financed building a separate banquet was organised for the *ordo*. Examples include *Agbia* (*CIL* VIII, 1548), *Uchi Maius* (*CIL* VIII, 26264) and *Vallis* (*ILTun*. 1282).

85 In *Siviri*: *AE* 2008, 1676; in *Gillium*, *AE* 1936, 36.

86 In the city of *Mustis*, the priests of Ceres were named separately as recipients of a banquet, see *AE* 1968, 609.

87 Based on Warmington 1954: 39–55. C. Marius Extricatus, for example, was patron of the *pagus* in Uchi Maius, three kilometres away from *Thugga*. He was also *decurio* in Carthage (*CIL* VIII, 26276). The *magister* of *Thibaris*, an ancient city north of *Thugga*, was also *decurio* in the provincial capital (CIL VIII, 26185); also L. Memmius Marcellus Pecuarius from *Numlulis* (*CIL* VIII, 26121).

88 *AE* 1997, 1663a. Khanoussi and Maurin 2000: 159ff., Fig. 108; also *CIL* VIII, 1493 and *CIL* VIII, 15520.

89 Scheding forthcoming.

The high status such people had in their home cities did not necessarily mean that they enjoyed the same standing in the ranks of the city council at Carthage. Because of their relatively modest financial circumstances, it would have been out of the question that they could have competed with the elite of Carthage as benefactors. The funding of games in the provincial capital, for example, could easily cost five times more than what they had spent on a large public building in their hometown.[90] Furthermore, membership of the council of Carthage under Hadrian cost the equivalent of a public building in a small city like *Thignica* or *Numlulis*.[91]

Even if their ambitions extended to a micro-regional level as part of life in the provincial capital, their benefactions remained exclusively confined to their hometowns. Here buildings were used by benefactors to demonstrate personal success in their city and as an occasion to invite key groups from other cities and the micro-region to celebrate with them. It seems quite a convincing argument to assume that the banquets for smaller groups were celebrated in these 'family monuments'.[92] The benefactors were erecting what amounted to individual islands in the city: limited public spaces in the city, apart from the *forum*, in which they created monuments to represent themselves, which were also loci of their communication with the local authorities and rural interest groups.[93] While the benefactors lived in Carthage, these architectural monuments would stand as constant reminders of their accomplishments. This helps to explain why the architecture of these buildings was not merely a copy of the processes of urbanisation in Roman Carthage, but tended instead to be a specific selection of architectonic features based on a micro-regional idea of the city.[94]

This could be one of the reasons for the striking lack of monumental assembly halls in these cities. In the *forum* of the provincial capital one of the largest public basilicas of the Empire was erected,[95] but neither the *forum* in *Thugga* nor that in *Thuburbo Maius* has such an edifice. To judge from the epigraphic and archaeological evidence currently available, none of the *fora* of this micro-

90 200,000 HS according to *ILTun* 1050, see also Duncan-Jones 1990: 104, No. 281.

91 The erection of the *capitolium* of *Numlulis* cost 29,000 HS: *CIL* VIII, 26121. See also Crawley Quinn and Wilson 2013: 117–173. It appears from *AE* 1910, 78 that the office of *IIvir quinquennalis* in Carthage cost over 38,000 HS as early as 133 CE.

92 This practice is also visible in other regions of the Empire, Eck 2010: 275–298.

93 See also Zanker 1994: 265 ff.

94 *Contra* Khanoussi and Maurin 2000: 124, who interpret the evolution of the cityscape of *Thugga* as pointing to "l' assimilation de la ville à une 'petite Rome'".

95 Gros 1985: 146; Rakob 1990: 246.

region appear to have been equipped with basilicas.[96] This suggests that in the cities of the hinterland of Carthage, enclosed loci for communication between members of elite families and small interest groups were deemed more important than public buildings capable of accommodating gatherings of the civic community as a whole.

5 Concluding Observations

The different understandings of urbanity which can be observed in the immediate hinterland of Carthage and in other parts of Africa Proconsularis can be explained as reflecting region-specific patterns of economic and social interaction.

None of the monumentalised but small cities which were situated in Carthage's hinterland occupied a dominant position in the economic or administrative systems of the region. In contrast to *Bulla Regia*, cities like *Thugga* or *Thuburbo Maius* were situated in close vicinity to other cities which served as administrative centres and marketplaces. This meant that the open public plazas of these settlements in the hinterland of Roman Carthage did not need to have the capacity to welcome many people at one time. Instead, the streets and the plazas of these cities were meant to be used primarily by the inhabitants of the cities themselves. Therefore a second open public plaza—like in *Bulla Regia* or other major cities in Africa—was not necessarily desirable.

This situation contrasted with that in those regions in which cities were centres of larger hinterlands. The inhabitants of the small settlements surrounding cities like *Bulla Regia*, *Cuicul* or Timgad needed to go to these cities to trade and to make use of urban amenities. Therefore many plazas, basilicas and important streets were erected to accommodate a large number of people from the hinterland.[97] Unlike the public buildings of *Thugga* and *Thuburbo Maius*, those in *Cuicul*, *Bulla Regia* or *Simitthus* were related to the major plazas or streets of the city, with the aim of presenting these monuments not only to the city community but also to people coming from outside the city.

The diversity and connectivity of small social groups is another significant characteristic of the dense urban micro-region in the hinterland of Carthage.

96 The basilica at the temple of Dis and Saturn in *Thignica* was located outside the city and was incorporated in a sanctuary: Ben Hassen 2006: 55–75.

97 In the small city of *Thubursicum Numidarum* a large basilica was erected on the slope of the hill; see Kleinwächter 2001: 269 ff., Fig. 33, maps 5 a–b; Blas de Roblès and Sintes 2003: 217.

The productive territories, cities and settlements of this region were organised by elite families and other small interest groups which acted on an urban, local and regional scale. The wealthier members of these groups erected all kinds of monumental buildings in these cities. In addition to serving as markers of the success of local families in their hometowns, these gated areas in the city created very specific and important loci of communication. The porticoes in particular created small-scale spaces in which a variety of local and urban collectives could gather and perhaps also erect statues other than those in the forum.[98] It might be suggested, for instance, that the people who had built such spaces used them to hold banquets and therefore as places of individual representation.

Even if the number of public buildings in *Thugga* and Timgad was fairly comparable to what we find in the cities of northern Proconsularis, the concept of the city and the collective transformation of urban space in the latter region was very different.[99] In this area, more significantly than in other regions, urbanity was determined by small social groups rather than by the city community as a whole. The isolated urban spaces of this region reflect a 'micro-regional idea of the city', in which the cityscape was a composite of public monuments serving the needs and aspirations of these groups, rather than the economic and social needs of a large region.

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98 Cf. Plin. *Ep.* 9.39: *si aedem quam pulcherrimam exstruero, addidero porticus aedi, illam ad usum deae has ad hominum.* The *forum* was dominated by statues of the imperial family: Zanker 1994: 265ff.

99 Briand-Ponsart 2003.

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CHAPTER 12

Urbanisation and Population Density: The Case of the 'Small *Municipia*' in the Balkan and Danube Provinces

Damjan Donev

1 Introduction

The following study will call attention to a concrete link between population density and urbanisation. The relationship between these two parameters has long been observed by economic geographers and anthropologists and has been acknowledged by scholars who study the urbanism of Antiquity.[1] To some extent, this is a self-evident conjunction. It makes little sense to argue that the emergence of towns is unrelated to the regional demographic profile. A certain level of population density is a necessary prerequisite for the concentration of people and resources in a single settlement. In areas of low population density one of the essential preconditions for urbanisation—the agricultural surplus necessary to sustain the urban population—is missing, while the town's central role as a place of exchange and redistribution becomes superfluous.[2] Towns do not appear in deserts or steppes prior to the modern era.[3] The border between the Roman Empire and *Barbaricum* was at the same time a border between zones of high population density and advanced agriculture, on the one side, and sparsely populated areas occupied by shifting agricultural communities or highly mobile herdsmen, on the other.[4] The creation and maintenance of towns is an expensive undertaking and without the necessary human capital they are unlikely to survive. That the link between population density and levels of urbanisation has not been espoused more frequently among the schol-

1 Population density and the emergence of the state: Carneiro 1970: 733–738; Boserup 1976: 21–36; population density and technological change: Kremer 1993: 681–716; Becker, Murphy and Glaeser 1999: 145–149; population density and the ancient economy: Scheidel 2007: 38–87; Lo Cascio 2009: 87–106.

2 Boserup 1976: 31.

3 *Palmyra* is obviously an exceptional case, see Seland 2016.

4 Notwithstanding the considerable variations in population density within the Empire, Scheidel 2007: Table 3.1.

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ars of Antiquity is largely due to the fact that past population densities are notoriously difficult to reconstruct, notwithstanding the improved quality of archaeological surveys in the past several decades.[5] There is also a problem of methodology. To some extent, the relationship between population density and urbanisation is bound to remain in the hypothetical sphere. There is little point in correlating population density to urbanisation when towns and their surroundings are by definition the most densely populated corners of a given region. Although easily elaborated in theory, the connection between towns and population density is almost impossible to demonstrate by means of simple correlations.

It was only by chance that we discovered another possible approach to the study of this problem.[6] This paper will try to demonstrate that the relevance of population density for the level of urbanisation in a given area is also reflected in the variable size of the urban territories. This connection will be elaborated on by using the example of the so-called small *municipia* of the Balkan and Danube provinces.

2 The 'Small *Municipium*'

The concept of the 'small *municipium*' was introduced in the scholarly literature pertaining to the region of the Middle Danube and the Balkan Peninsula by A. Mócsy.[7] Its meaning was seemingly straightforward. Mócsy was referring to a group of *municipia* which stood outside the dominant historical currents in the area. They were poorly attested in the written sources, while their meagre archaeological heritage has rendered them almost indistinguishable from the average *vicus*. Nonetheless, the scant epigraphic and historical sources leave no doubt as to the autonomous status of these communities. Officially they were towns and administered their own territories. At the time, Mócsy saw them as a symptom of the backwardness and low degree of Romanisation in certain parts of the Pannonian provinces. They highlighted the inner limits of Roman urbanisation in the area.

The phenomenon of the 'small *municipia*' fitted well into the model of total municipalisation of the provincial territories, embraced wholeheartedly by

5 Bintliff and Sbonias 1999; Bowman and Wilson 2011.

6 The present paper is based on the results of the study of the territorial extents of the Early Roman towns in the Balkan and Danube provinces, carried out within the framework of the ERC Advanced Project 'An Empire of 2000 Cities.'

7 Mócsy 1964: 9–17; Mócsy 1974.

Mócsy.[8] It served to demonstrate that the principal policy of the provincial government was to create autonomous town-based communities in every corner of the provinces, regardless of the local socio-economic realities. Implied in this model is the view that the autonomous towns in the Danube provinces were the outcome of a centrally planned policy. Only in certain parts of Pannonia was there a solid base for 'spontaneous' urban growth.

As we will shortly see, the 'small *municipia*' never developed into a well-defined concept. It is not easy to pin-down the individual defining features of the 'small *municipium*'. Its meaning became ever more diffuse as it begun to denote the shortcomings of Roman urbanisation in certain parts of the Balkan provinces.[9] Admittedly this terminology was not used outside the Pannonian provinces, but close parallels can be found in Dalmatia and Moesia Superior and even in the Hellenistic provinces of Epirus and Macedonia. Can one talk about the 'small *municipium*' as a regional and even a general phenomenon? There is an obvious difficulty in defining 'smallness'. Where to draw a line between the 'small' and 'big' *municipia*, and what if there were 'medium-sized' *municipia*? In what follows we will try to identify a few defining parameters of the 'small *municipium*'. This effort is not going to bring us any closer to offering a precise definition of this phenomenon. At least some of the features associated with the 'small *municipia*' are also encountered among the mining *municipia* and some of the autonomous garrison towns. But this circumstance does not necessarily call into question the validity of the concept altogether. On the contrary, it possibly indicates that this phenomenon was not confined to the civilian sector. It is important to stress that our aim is not to come up with a definite list of 'small *municipia*' in the western Balkan and Danube provinces. The 'small *municipia*' were brought into the focus of this study because they illustrate the intricate relations between urbanisation, territory and population density. However, in order to gain a better understanding of the concept, it is necessary to draw the profile of the 'small *municipium*' first.

3 The 'Small *Municipia*' in the Written Sources

The 'small *municipia*' are rarely mentioned in the written sources. These towns are known solely from the scant epigraphic monuments and, in some instances, their names are also encountered in itineraries, but their status is usually not

8 Mócsy 1970; Mócsy 1974: 130–183.

9 Bojanovski 1988; Nagy 2003: 75–83, is wrong to compare the 'small *municipia*' to the so-called small towns of Britain.

referred to in these sources. This is true for at least a dozen civilian towns and, if we add the garrison and mining towns or the towns whose autonomous status is uncertain, their number is likely to double or even triple. It is worth mentioning that, thus defined, this category of urban settlements could represent up to one third of all autonomous settlements in the region. The number of inscriptions referring to individual towns usually varies between one and five, although some of the towns that can be qualified as 'small *municipia*' by other criteria are well represented in the epigraphic record (Appendix 1).

Equally symptomatic of the 'small *municipia*' is the small number of epigraphic testimonies to civic magistrates. Most commonly no more than one or two magistrates are known per individual town and in some cases, none. Some of our 'small *municipia*'—*Halicanum*, *Horreum Margi*—are mentioned only as the places of origin in funerary inscriptions, military diplomas and milestones.[10] In official dedications the dedicator is the community of citizens rather than the individual magistrates.[11] The scant references to the town council and officials tie in with the humble archaeological remains at the sites of the 'small *municipia*'. The urban elites—the chief driving force behind the growth and architectural elaboration of the towns—kept an unusually low profile in the epigraphic record.

A particular characteristic of the Pannonian 'small *municipia*' is the prevalence of *scribae* among the epigraphically attested magistrates. A famous example comes from *Aquae Balissae*, where the former scribe of the *municipium* went on to become a *decurio* and *quattuorvir*.[12] A much earlier parallel comes from *Lissus* in southern Dalmatia.[13] This has been taken as an indicator of the dearth of qualified men among the urban elites.[14] Normally, freedmen could not aspire to enter the class of *curiales* nor were they particularly prominent in the epigraphic record of the Balkan towns.

The fact that the magistrates of a number of 'small *municipia*' were also members of the *curia* of the larger towns can be seen in the same light. Up to one third of the epigraphically attested magistrates held offices in major towns in the same or neighbouring provinces. To be sure, this practice was not limited to the 'small *municipia*', but is in accord with the rest of the parameters that characterise the 'small *muncipium*'. In most of the examples, these men were based in the larger town and their involvement in the administration of their

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10 *Halicanum*: *AE* 1979, 472; *Horreum Margi*: *CIL* III, 7591.
11 *Aquae Balissae*: *AE* 1912, 130–131.
12 *AE* 1964, 11.
13 *AE* 1982, 765–766.
14 Mócsy 1964: 17; Prendi 1982: 153–164.

smaller neighbours was probably driven by personal relations and economic interest. The 'small *municipia*' were thus often dependent on the goodwill and finances of the elites based in the major towns. Their elites were either too small or too poor to bear the burden of local government.

This limited capacity of the local elites finds a further possible confirmation in the large number of urban-based *beneficiarii*. The Balkan and Danube provinces boast the highest number of urban stations of the *beneficiarii consulares*.[15] Many of these were located in our 'small *municipia*', although they are also attested in towns of much greater renown.[16] The presence of these representatives of the provincial government in the autonomous civilian towns points to the special relationship between the central and local government. The latter were possibly hard-pressed to maintain order and dispense justice in their territories. Quite often, the official dedications commissioned by the *beneficiarii* comprise a large proportion of the epigraphic corpora from these towns.

In nearly half of the cases, the inscriptions referring to the 'small *municipium*' or its magistrates were not found at the presumed site of the town and in some instances they come from a different province (Fig. 12.1). Thanks to this circumstance, it is often impossible to associate the epigraphically attested *municipium* with a particular site. This is obviously related to the fact that the magistrates of these towns were often based in other urban centres. As has already been pointed out, the names of some of the 'small *municipia*' have been preserved only as places of origin of individuals, most commonly of soldiers who were buried outside their native territories. Either the epigraphic habit was of little importance to their compatriots or, more likely, there was little motivation for the veteran soldiers to return to their native towns upon discharge from army service. Even in the case of the *municipia* that are well attested epigraphically, most of the inscriptions come from the urban territory rather than from the town. As we will demonstrate in the following section, the incentive for investments in the urban centres was apparently limited among the elites of the 'small *municipia*'. They were eager to advertise their high social standing in the countryside, presumably on their estates, but not in the municipal centres.

Admittedly the epigraphic record is not the most reliable source for assessing the level of socio-economic development of a given community. The epigraphic habit primarily reflects the cultural values and norms of certain social classes rather than the socio-economic profile of the integral community.[17] It

15 Ott 1995.
16 For example, *Sirmium*: Mirković 1991: 252–256.
17 See, for example, Mouritsen 2005: 38–63.

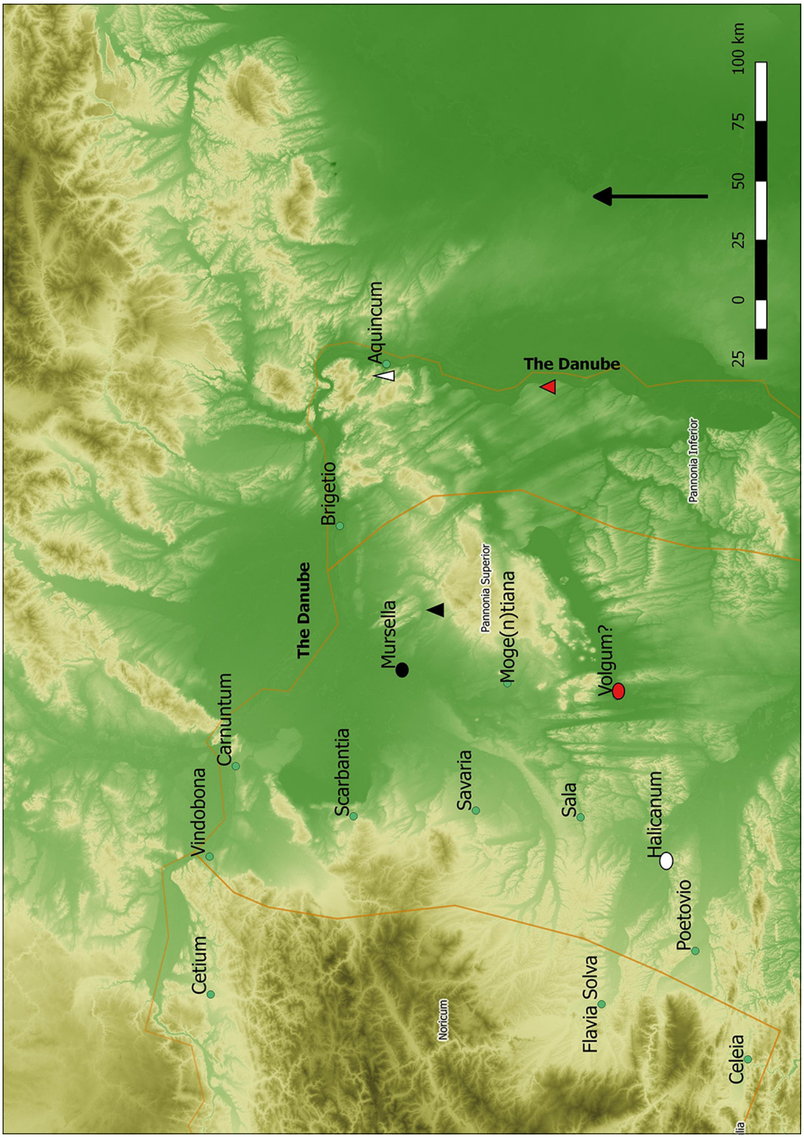

FIGURE 12.1 The 'small *municipia*' of Pannonia; triangles mark the find-spots of inscriptions, ovals the locations of the *municipia*

is conceivable that the inconspicuousness of our 'small *municipia*' has more to do with the prevalent cultural norms among these communities than with their demographic and economic strength. However, once we turn to the archaeological heritage of the 'small *municipia*', we will discover that it does not contradict the impressions gathered from the analysis of the epigraphic corpus.

4 The Archaeological Heritage of the 'Small *Municipia*'

The sites of about half of the *municipia* included in the list at the end of this chapter still have not been determined. These towns were located off the major roads and were not recorded in the itineraries. There are absolutely no clues about the possible locations of towns such as *Faust*(*o*) or *Volgum*. As in the case of the majority of the 'small *municipia*', the epigraphic monuments referring to these towns were commissioned in different settlements. It is possible that in these cases we are dealing with the so-called dispersed *municipia* or *municipia* without a central place.[18] However, there is very little positive evidence in support of this possibility, and the example of the 'small *municipia*' whose sites have been identified suggests that *Faust*(*o*) and *Volgum* were discrete central places that lacked the monumental trappings usually associated with the Classical town. Either way, these communities did not have a readily identifiable central place.

The rest of the 'small *municipia*' were located only thanks to the data contained in the itineraries. Their humble material remains could hardly give away their locations. Only scattered finds from the period of the High Empire mark the presumed locations of most of these towns. The example of *Salla*, one of the rare cases where the urban topography is more or less established, is particularly illustrative in this respect.[19] *Salla* was discovered only in the early 1970s, almost simultaneously with the discovery of the earliest epigraphic reference to this town as a *municipium* at the site of the sanctuary of *Aquae Iasae*.[20] This obscure *municipium* did not appear on Mócsy's administrative map of the province.[21] Its discovery came as a surprise at a time when the administrative map of Roman Pannonia was considered complete. But the late discovery of *Salla* is fully understandable in view of the character of the material remains at this site. The systematic excavations in modern Zalalövő revealed an agglom-

18 de Ligt 2012.

19 Redö 2003: 191–235.

20 *AE* 1979, 468.

21 Mócsy 1969: 340–375.

eration that can be described only as a roadside *vicus*. It was a ribbon-shaped settlement on the Amber Road that lacked public buildings and occupied an area not larger than 10 ha.[22] It seems that the settlement was abandoned at the time of the Marcomannic invasions, only to be reoccupied towards the end of the third century. By then, it had certainly lost its former status and, in the fourth century, it functioned as a road station.

One suspects that the rest of the 'small *municipia*' were not much different from *Salla*. The excavations at the supposed sites of *Mogentiana* and *Halicanum* suggest that these towns were not larger than *Salla*.[23] Monumental remains or securely established public buildings have not been discovered, and it is unlikely that future research will bring them to light. It is worth noting that, like *Salla*, *Mogentiana* and *Halicanum* were road stations. A recently published study that attempts to locate the *municipium Spodent*(*ium*) identifies this town with yet another roadside settlement along the Sava Road in Pannonia Inferior.[24] The interpretation of the archaeological data is not particularly convincing, but in view of the parallels with Pannonia and the neighbouring provinces, it is a hypothesis that should not be written off. The situation is not any different outside the Pannonian provinces. The Early Roman phase in *Horreum Margi* in Moesia Superior is represented by residual finds, while the latest research has demonstrated that *Margum* had a built-up area not larger than 7–8 ha.[25] Only one or two of the Dalmatian 'small *municipia*' can be located with a high degree of certainty, but next to nothing is known about their topography.[26] In all likelihood, all of these towns were small and did not abound in public buildings or monumental sculpture.

It appears therefore that the inconspicuousness of the archaeological remains is a constant among the 'small *municipia*'. While a few of these towns were relatively well represented in the epigraphic record, none shows the physical traits of a true urban settlement. This circumstance cannot be ascribed to inadequate research. Were there monumental remains at the sites of these towns, they would have been discovered and excavated by now. The inconspicuousness of the 'small *municipia*' poses a serious challenge to those wishing to reconstruct the urban geographies of the Balkan and Danube provinces. One

22 Redö 2003: Fig. 3.

23 Nagy 2003: 80–82; Tomičić 1979: 40–43; Migotti 2012.

24 Crnobrnja 2011: 373–388.

25 Petrović ed. 1979; Vasić, Kavajin-Mundrić and Popović 1989: 7–37; Ivanišević and Bugarski 2012: 239–255.

26 The controversies over the exact locations of *Delminium* or *Malvesia* are exemplary: Bojanovski 1974; Benac 1975; Škegro 2000: 395–403; Papazoglou 1957: 114–122; Bojanovski 1968: 241–261.

wonders how many 'small *municipia*' are out there, still awaiting their discovery. The implications for the reconstruction of the urban hierarchy are equally significant. The example of the 'small *municipia*' undermines the positive correlation between administrative status, settlement size and levels of monumentality. In certain parts of this region virtually any stable agglomeration could have performed the role of an administrative centre.

Small administrative centres without any monumentality are not an exclusive feature of the Latin provinces of the Balkan Peninsula and the Danube. Our list of 'small *municipia*' can be expanded with a group of *oppida* or *poleis* in Epirus and Macedonia.[27] Unlike the 'small *municipia*', the locations of these settlements are known. In most of the cases, they had been founded centuries before the Roman conquest, and most of the monumental buildings pre-date the Roman period. Although there is no clear evidence of abandonment, the fact that not a single major construction can be dated after the Roman conquest is surely indicative of the reduced wealth and importance of these places in the new urban constellation. To be sure, these towns differed in many aspects from the newly founded 'small *municipia*'. The only characteristic common to both categories was the small number of historical testimonies or architectural monuments datable after the Roman conquest. It is difficult to dissociate these symptoms from a phase of economic and possibly even demographic decline or a failed start in the case of the newly founded Latin *municipia*.

It is not easy to account for the reduced size and humble appearance of these towns. In the case of some of the Latin *municipia* that developed from non-urbanised *civitates peregrinae*, it is possible that dispersed or polycentric settlement patterns persisted during the Empire, thus inhibiting the development of a large central place. One might cite the example of the *municipium* of the *Delmatae*, where the inscriptions referring to the town officials or the *municipium* are scattered across the urban territory, while the location of Roman *Delminium* remains controversial.[28] In the scholarly literature this town has been identified with at least two different sites. Equally symptomatic is the omission of *Delminium* from the itineraries, which is yet another argument in favour of the dispersed *civitas* thesis. It is possible that in this and in similar cases—*Diluntum*, *Salvium* or *Malvesia*—the central place of the community was merely symbolic. Needless to stress, it is nearly impossible to find tangible evidence to corroborate this theory and, without evidence, the attribution

27 See, for example, *Albanopolis*, Josifovska-Dragojević 1971: 513–522; Islami 1972: 217–233; *Antipatrea*: Spahiu 1975: 495–501.

28 Bojanovski 1974: 240–244.

of the lack of urban growth to the low degree of centralisation in these micro-regions is a typical case of circular argumentation.

Some scholars have observed the close connections between the *municipia* and the major roads in the provinces, suggesting that the chief role of these towns was the maintenance of the road network and the providing of logistical assistance for the travelling state officials.[29] According to this theory, transport rather than agricultural production was the primary economic focus of these communities and, for this reason, they might have had small urban territories. After the abandonment during the Marcomannic crisis, *Salla* was stripped to its essentials continuing only as a road station. But while this explanation accounts for the obvious relationship between roads and *municipia*, it fails to explain the limited growth of these towns. *Stobi*, a town on the northern border of Roman Macedonia, was surely involved in trade and transportation, but it hardly deserves to be called a 'small *municipium*'.[30] Like the majority of the Roman towns, the Latin *municipia* were often located on major roads or river crossings. Finally, while some of the Balkan *municipia*—*Stobi* or *Dierna*—were probably in control of small and not particularly fertile territories, the epigraphic evidence suggests that at least some of our 'small *municipia*' had very large territories. A complex set of factors stands behind the limited growth of these towns, including the natural riches and population levels in the urban territories.

5 The 'Small *Municipia*' in the Regional Urban Network

Another characteristic of the 'small *municipia*' is their place in the wider urban and road network. A superficial look at the urban map of the study region in the period of the High Empire will reveal that nearly all of the very large towns are located along the periphery of the system (Fig. 12.2). These are the towns that developed near the legionary camps on the Danube *Limes*, the major port towns on the Adriatic coast and the towns along the Amber Road. Only a minority of the very large towns were located in the 'interior' of the area, usually in control of major crossroads and spaced at great distances. The 'small *municipia*' are either located on the major thoroughfares, acting as midway

29 Šašel 1992.

30 During the Late Republic *Stobi* functioned as an *emporium* of the third Macedonian district for the export of salt in Dardania (Livy 45.29.13). The attraction it held for Roman colonists can hardly be linked to the agricultural riches of Stobi's territory, Papazoglou, 1986: 213–238.

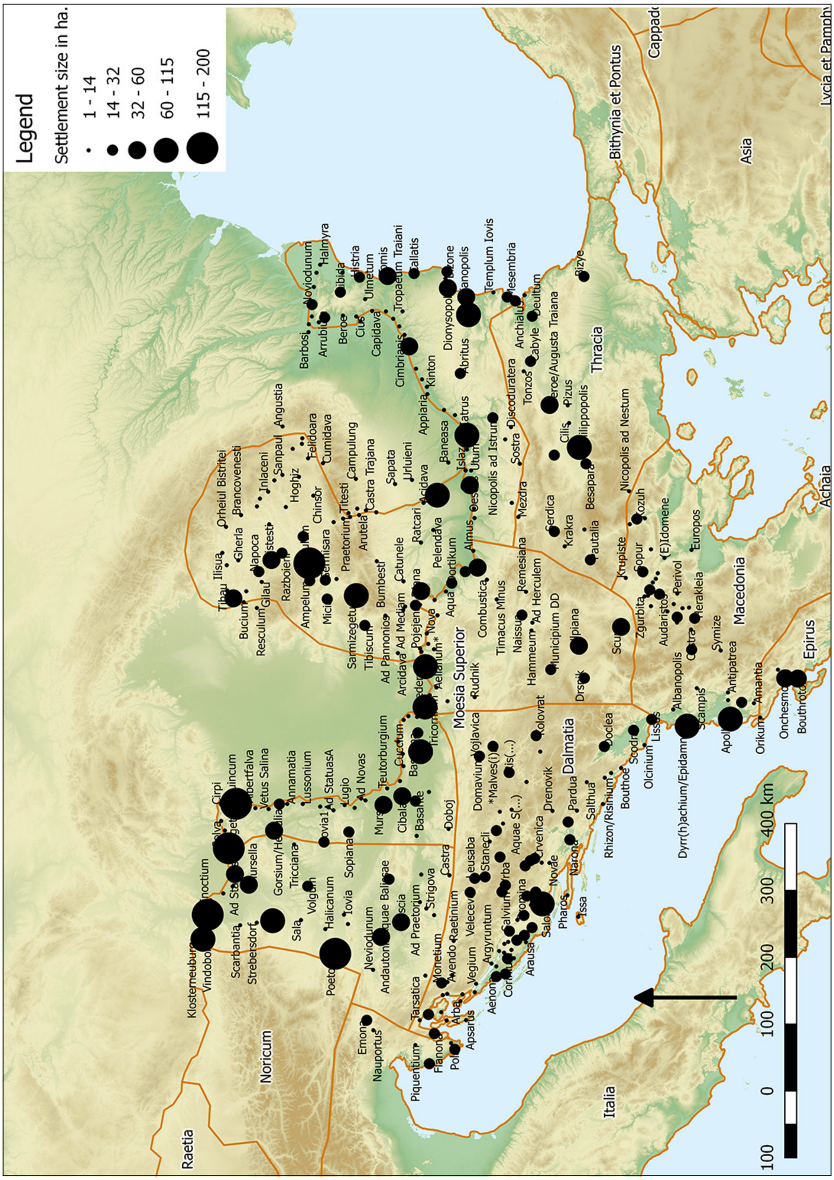

FIGURE 12.2 Settlement-size distribution in the Balkan and Danube provinces

points between two major towns—echoed in their role as road stations—or off the major roads, extending the urban network into the remotest corners of the region. These locations surely reflect the secondary position of these settlements in the urban system. They were both relatively late creations and of lesser importance than the major *municipia* and colonies.

This distribution has an important consequence for the territorial size of these communities. Predictably, positive evidence for the territorial size of most of these towns is missing, but Thiessen polygon analysis suggests that between 50 and 60% had territories larger than the provincial averages (Fig. 12.3). This is primarily preconditioned by the locations of the 'small *municipia*' in the regional urban networks. Most of these towns are located in zones of large intercity distances. They are either exposed to the 'interior' of the provinces, i.e. the areas that are bypassed by the major interregional roads, as in the frontier provinces, or they are distributed along the edge of the regional network, facing mountainous areas, as in certain parts of Dalmatia and Epirus. In both scenarios, the 'small *municipia*' are among the most outlying settlements in the urban networks, and this is the reason why the Thiessen polygons attribute large segments of the provincial territories to these towns. At the same time, the large towns are often assigned small to average-sized territories, because they are located on the geometric periphery of the network.

6 The Territories of the 'Small *Municipia*'

These territorial arrangements are not purely hypothetical. Three out of four 'small *municipia*' whose territorial extents are evidenced in inscriptions and itineraries have territories extending over several thousand km^2. The evidence for these reconstructions is scant, but it is nonetheless extremely valuable. Because the main argument of this paper largely depends on the interpretation of these data, we must take a closer look at these three *municipia*.

Most scholars agree that the *municipium* known from the epigraphic sources as *Aquae Balissae* was created on the territory of the *Iasae*.[31] The location and territorial extent of this Pannonian people are only vaguely indicated in the written sources.[32] However, the approximate territorial limits of the Iasae after the founding of the *municipium* in modern Daruvar can be charted with the help of archaeological and epigraphic evidence. About 90 km to the northwest

31 Schejbal 2004: 99–129.

32 Plin. *NH* 3.147; Ptol. 8.15.2; Mócsy 1969: 349–350.

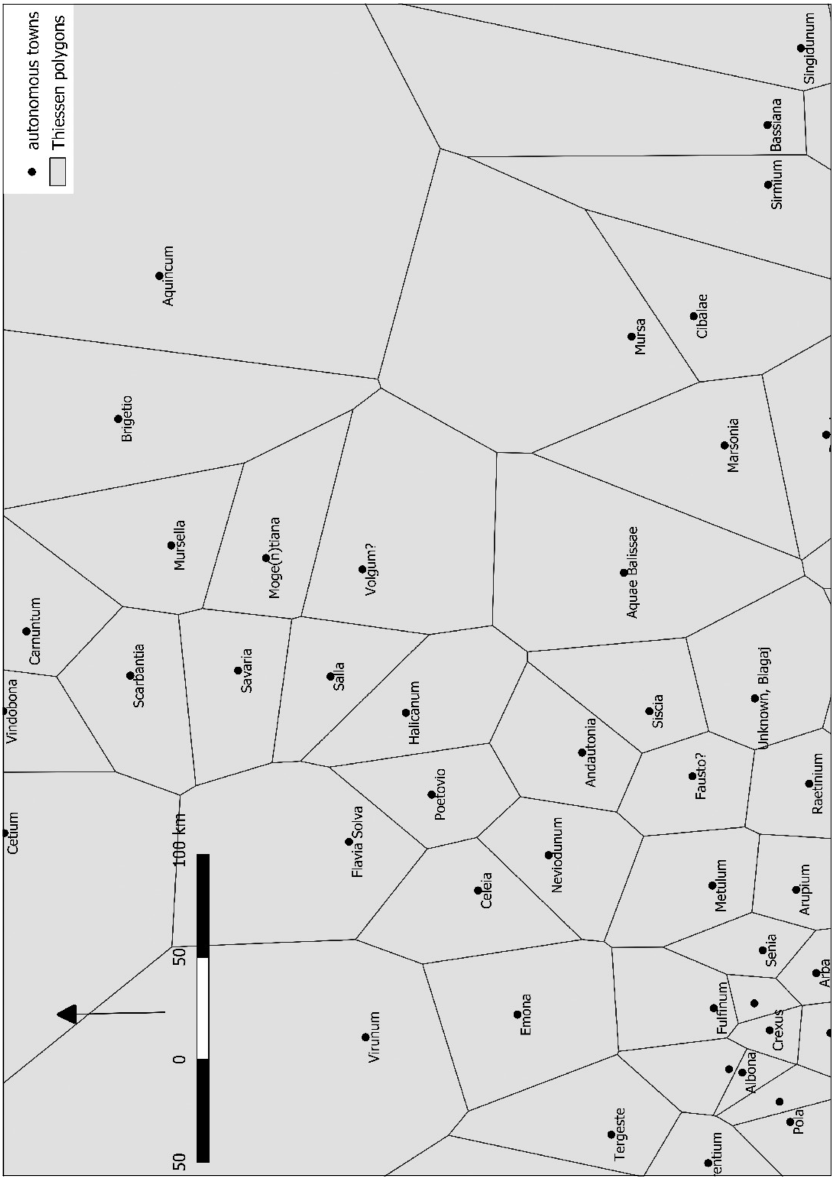

FIGURE 12.3 Thiessen polygons around the autonomous Pannonian towns

of *Aquae Balissae*, archaeological research has brought to light the remains of a bath resort and sanctuary.[33] Thanks to an inscription of the early fourth century CE this site could be identified with *Aquae Iasae*. The toponym obviously indicates that the settlement was founded on the territory of this people.

To be sure, the general scholarly consensus is that the bath resort belonged to the territory of the colony of *Poetovio* and not to the *municipium*.[34] This is borne out by the involvement of the *Poetovian* aristocracy in this bath sanctuary, evidenced in a number of votive and building inscriptions commissioned by the magistrates of the colony. However, if *Aquae Iasae* belonged to the *Poetovian ager*, it was almost certainly located on its southern periphery. South of *Aquae Iasae* there are no epigraphic traces of the activity of the *Poetovian curia*. The area of the Sava-Drava Interfluve constitutes a separate micro-region, with a distinct geography and geology.[35] Positive evidence for the spread of the municipal territory over this entire region is lacking, but it is nearly impossible to propose a different administrative base for the area in question. There is no evidence for the presence of large imperial districts in this part of Pannonia Superior nor is the *civitas* of the *Iasae* attested in the written sources after the founding of the *municipium*.

A final confirmation of the large extent of the municipal territory is offered by a funerary monument of a soldier of the praetorian cohort found in Rome.[36] This document reveals the origin of the soldier, stating the name of his native *vicus* and *pagus* on the territory of *Aquae Balissae*. By a lucky coincidence, the name of the *vicus* is identical with a name of a station on the Drava Road, between *Poetovio* and *Mursa*. (Fig. 12.4).[37] On the basis of the distances given in the itineraries, this station is located about 30 km to the north of the *municipium*, on the right bank of the Drava. In conjunction with the name of the bath resort of *Aquae Iasae*, this inscription extends the municipal territory over an area of at least 5,000 km^2, which is slightly less than the projections based on the Thiessen polygons.

Another well-attested Pannonian example is *Mogentiana*. This town is unlike the majority of the 'small *municipia*' in that its *curiales* are mentioned in a fairly large number of inscriptions. At the same time, the way these inscriptions are scattered through the countryside leaves no doubt that *Mogentiana*

33 Gorenc and Vikić 1979: 32–49; Ehrlich-Nemeth and Kušan-Špalj 2014: 133–140.
34 Rendić-Miočević 1992: 67–76; Ragolič 2014: 323–351.
35 Schejbal 2003: 393–416.
36 *CIL* VI, 3297.
37 *Cocon(is)ae*: *Itin. Burdig.* Gračanin 2010: 9–69.

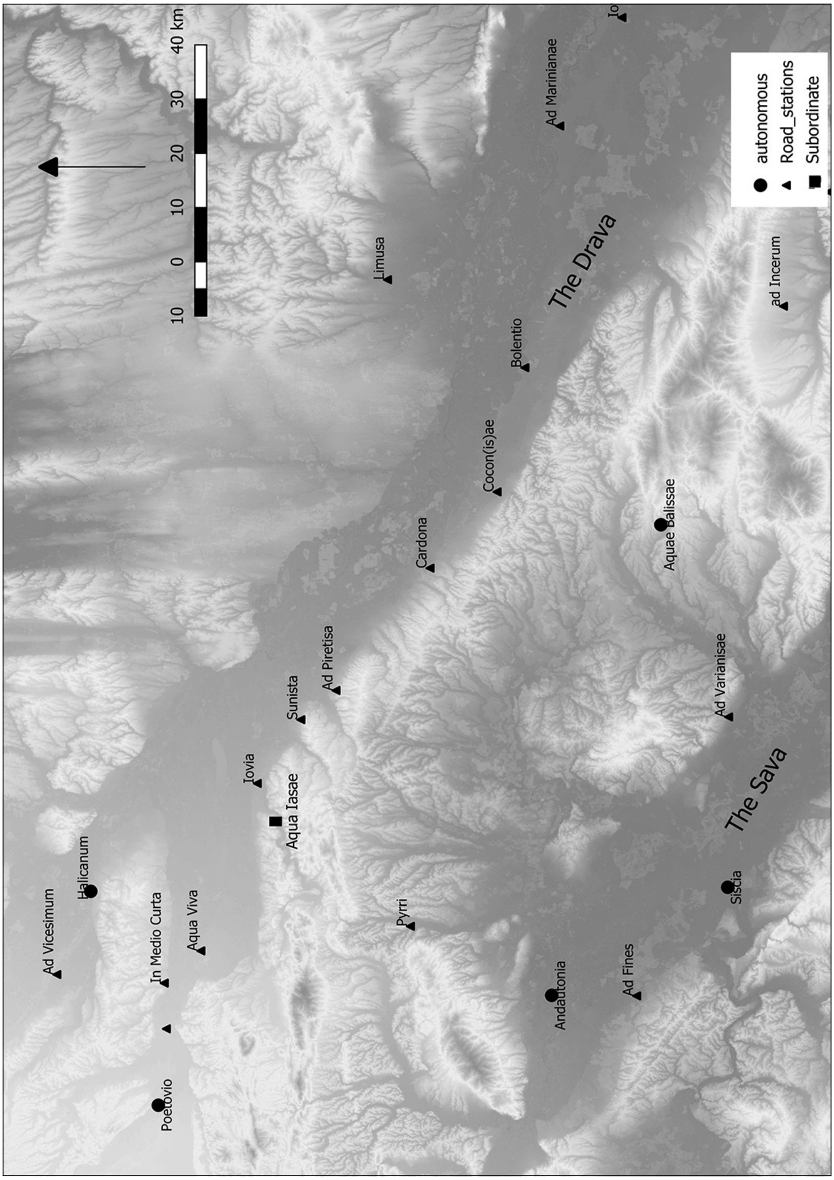

FIGURE 12.4 *Aquae Balissae* and the sites associated with its territory

belonged to this category of settlements.[38] Not a single monument has been found at the supposed site of the *municipium*, and few were discovered in the micro-region that gravitates towards *Mogentiana*. This circumstance proved useful in the drawing of the municipal boundaries. The inscriptions that refer to *Mogentiana* and its magistrates are distributed in two clusters. A couple of epitaphs of town officials, is located on the western shore of Lake Balaton, about 40 km to the southeast of the *municipium*.[39] This cluster clearly marks the eastern municipal boundary. Although there are inscriptions commemorating the magistrates of other Pannonian towns in this area—a trait typical of the non-municipal districts—these are individual examples and they are concentrated towards the northern tip of the lake, whereas the inscriptions referring to *Mogentiana* and its magistrates are clustered in the southern section of the western shore of Lake Balaton.

The second cluster of inscriptions is far more problematic. It consists of at least six or seven funerary monuments or votive inscriptions, scattered in the Little Hungarian Plain, at the northern foot of the Bakonyi Hills (Fig. 12.5).[40] This micro-region is located at a distance of about 80 km from the supposed site of the *municipium*, casting some doubt over the identification of *Mogentiana* with the remains near modern Tuskevar. Particularly controversial was the fact that the inscriptions referring to *Mogentiana* were found too close to the legionary camp of *Brigetio* and on the territory of the *municipium* that had grown up from the nearby *vicus* by the Severan period. Because they appear at such great distances from *Mogentiana*, some scholars have thought that these inscriptions were not discovered at their original locations.[41] This explanation is neither satisfactory nor necessary to understand the spread of the inscriptions that refer to *Mogentiana* and its *curia*. Of course, the reuse of inscribed monuments is nothing unusual for this region in the period of Late Antiquity, but in these cases the inscriptions are normally reused in major architectural monuments.[42] With the exception of the group of inscriptions discovered in the Late Roman fort near modern Környe, the *Mogentiana* inscriptions were found isolated at a number of different locations. It is unlikely that these stones were dragged all the way from *Mogentiana* only to be reinserted into parish

38 Nagy 2003: 75–78.

39 *AE* 2001, 1637, a funerary inscription from Vászoly, and *AE* 1996, 1240, an epitaph from Kékkút.

40 *CIL* III, 10993, an *IOM* dedication; *RIU* 657, a dedication; *RIU* 660, an epitaph; *RIU* 0697, an epitaph; *RIU* 707, an epitaph etc.

41 Barkóczi and Soproni eds. 1981.

42 See, for example, the case of the Late Roman fort near modern Bölcske (Szabó and Tóth 2003).

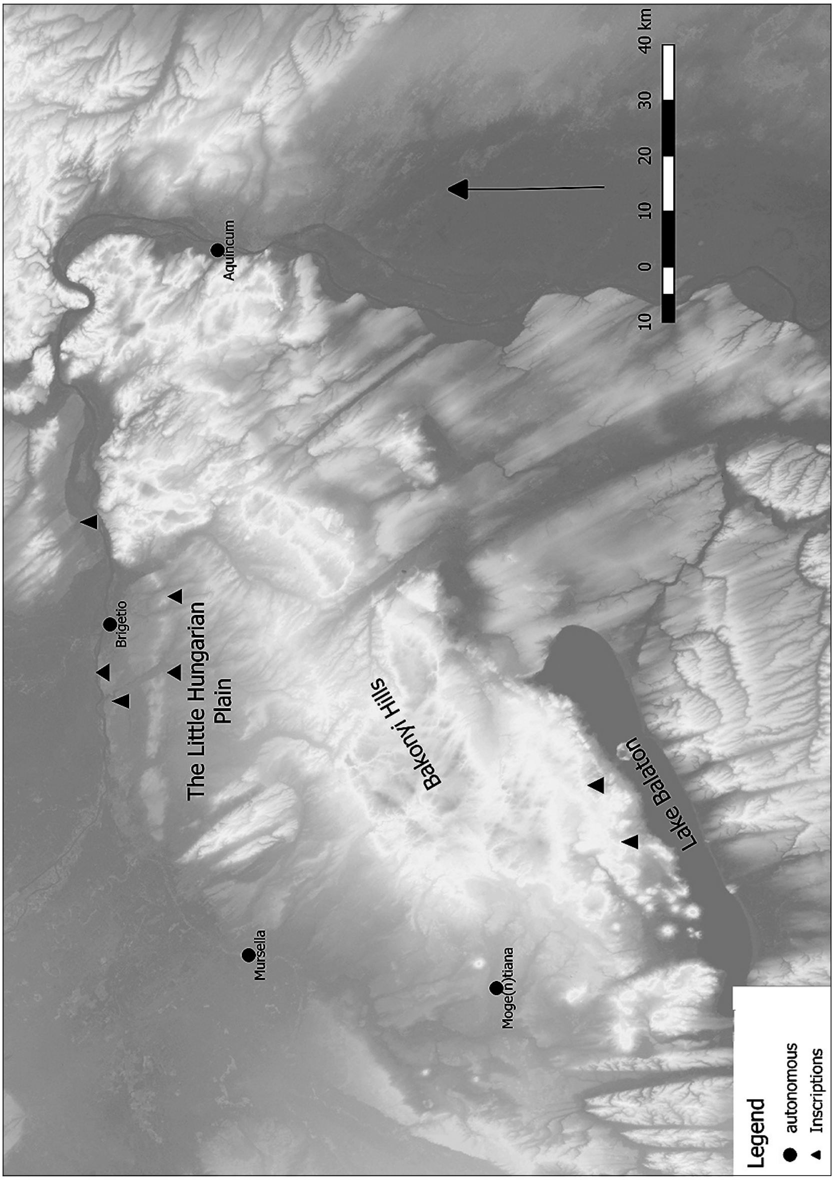

FIGURE 12.5 *Mogentiana* and the inscriptions mentioning the town or its *curia*

churches or individual tombs, and it is even less likely that the plunder of inscribed stones was so thoroughly done as to leave not a single epigraphic testimony in the municipal centre.

The spread of the *Mogentiana* inscriptions in the territory of *Brigetio* is somewhat more understandable in light of the founding dates of these towns. *Mogentiana* was proclaimed a *municipium* under Hadrian, whereas *Brigetio* was granted an official charter almost one century later, under Caracalla.[43] Is it possible that prior to the promotion of *Brigetio*, the Little Hungarian Plain had been governed by *Mogentiana*? This is a plausible suggestion. After all, the inscriptions referring to *Brigetio* and its *decuriones* roughly overlap with the *Mogentiana* cluster. The rub is that most of these documents are only roughly dated to the Late Antonine or the Severan period, and, theoretically, they could date from both prior to and after the promotion of *Brigetio*. However, at least one of the *Mogentiana* inscriptions post-dates Caracalla's grant from 214 CE. This is a dedication to Philip the Arab voted by the council of *Mogentiana*.[44] We are not sure if this evidence is sufficient to reject the reconstruction of *Mogentiana*'s territory prior to 214 CE. The involvement of the urban elites in the frontier zone is nothing unusual for the Danube provinces, but *Mogentiana* is unparalleled for the large number of inscriptions that appear in the zone behind the Danube *Limes*. In this context, it is important to stress that these inscriptions are not confined to the *Limes*. They also appear in the fertile plain, tens of kilometres behind the frontier. The mid-third-century dedication to the reigning Emperor probably illustrates the continued involvement of *Mogentiana*'s elite in this area. The town elite of *Mogentiana* must have continued to own land in what had originally been part of its territory.

Even without the Little Hungarian Plain, *Mogentiana*'s territory would have extended over at least 4,000 km^2. This estimate is certainly valid for the period following the promotion of *Brigetio*, when the Hadrianic *municipium* definitely lost the fertile plain at the northern foot of the Bakonyi Hills. Prior to this date, it is possible that the urban territory of *Mogentiana* comprised no less than 7,000 km^2!

The last example comes from southeast Dalmatia. This is one of the most isolated and least researched corners of Roman Dalmatia. The *municipium* in question is *Malvesia*.[45] Like *Mogentiana*, its name and magistrates are well represented in the epigraphic record, but it joins the rest of the 'small *municipia*' in

43 Mócsy 1969: 349–350; Nagy 2003: 75; Barkóczi and Mócsy eds. 1976; Borhy et al. 2003: 231–251.

44 *AE* 2003, 1375.

45 Bojanovski 1968: 241–261; Bojanovski 1988: 177–192.

that it is archaeologically indistinct, while the epigraphic monuments are not concentrated in the urban centre but scattered across its hinterland. Thanks to this circumstance, the municipal boundaries are relatively easy to define. The inscriptions referring to *Malvesia* and its *curia* form a compact cluster between the rivers Drina, Morava and Lim.[46] (Fig. 12.6) They are spread over an area of about 3,000 km^2. This estimate falls short of those for the two Pannonian *municipia* but, in a Dalmatian context, *Malvesia* had one of the largest territories in the province.

These territorial arrangements are not unparalleled. Large territorial units are not unusual in the region of the Balkan Peninsula and the Danube. Roman Thrace is the province with the best documented urban territories in this region. The territories of the Thracian towns are relatively well known thanks to the roadside dedications to the reigning emperors erected at the sites of road stations by the city councils.[47] When plotted on a map, the dedications commissioned by the individual town councils spread over areas of up to 6,000–7,000 km^2. However, the towns of Roman Thrace cannot be qualified as 'small *municipia*'. They produced monumental archaeological remains and a rich epigraphic corpus, but if we are to judge from a series of building inscriptions commissioned by the provincial governor, they struggled to maintain order in their gigantic territories.[48] These documents erected in the outlying corners of the urban territories inform us that the provincial government financed the construction of hundreds of small military outposts, presumably for the protection of the urban residents and their properties. Even though archaeologically recognisable and equipped with fully developed local institutions, the towns of Roman Thrace were overwhelmed by the size of their territories.

More parallels can be found in nearly all Balkan and Danube provinces. Some of the mining districts or areas under military supervision belong to the same size ranges as the Thracian towns or the 'small *municipia*'.[49] In view of the large intercity distances in most parts of this region, the large size of the territorial units is easily comprehensible. There was simply no other way of securing a full administrative coverage of the provincial territories. The same circumstance necessitated close cooperation between the central and local government.

46 *CIL* III, 8345, an epitaph found near Požega; *AE* 2010, 1161, an epitaph from Rudo; *CIL* III, 8340, an epitaph from Užice.

47 Mihailov 1961; Mihailov 1966.

48 Gerov 1980: 273–283.

49 Dušanić 1977: 52–94.

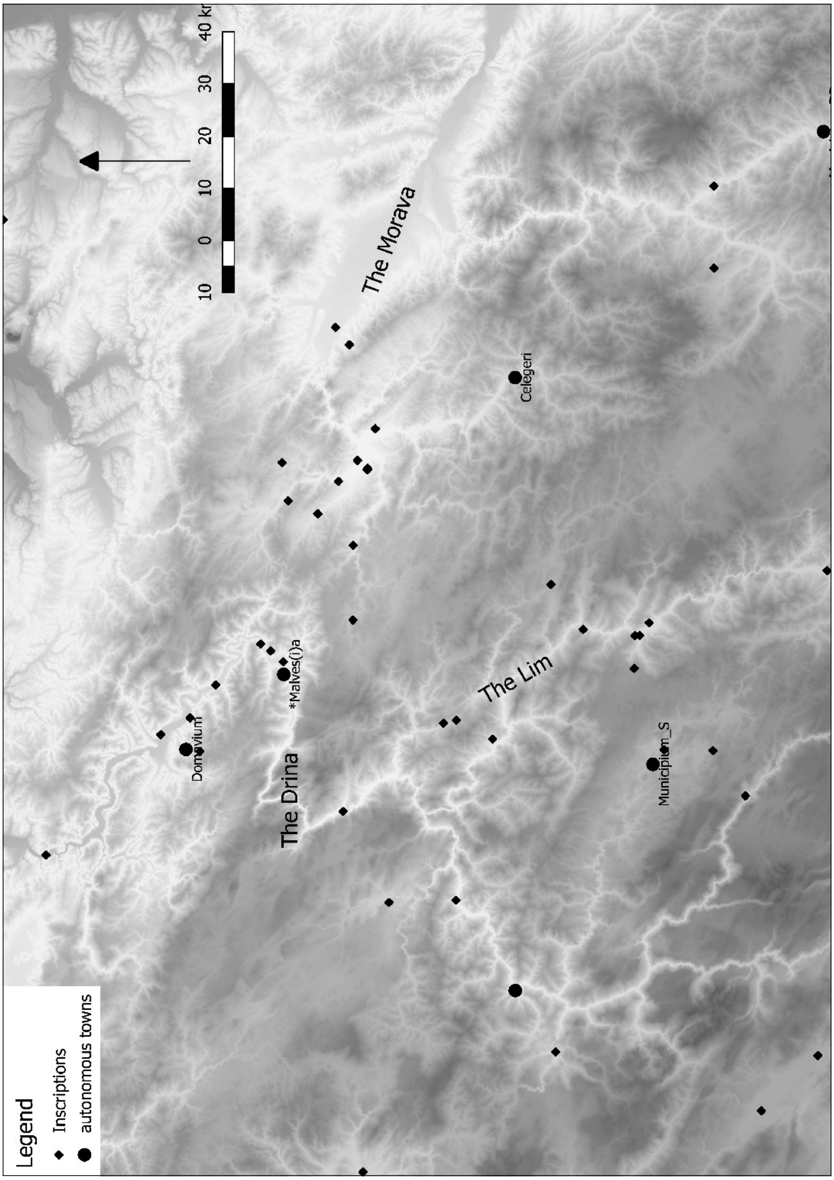

FIGURE 12.6 *Malvesia* and the inscriptions referring to the town or its *curia*

7 Conclusions: The Paradox of the 'Small *Municipium*'

Large territorial expanses were not an exclusive characteristic of the 'small *municipia*'. They are a general feature of our study region and, one supposes, of all areas characterised by low urban densities. We were nonetheless baffled when faced with the paradox of having small and indistinct towns in control of such large swathes of territory. How should we explain the fact that towns that are impossible to identify on the archaeological map and whose elites left but a few funerary inscriptions were charged with governing territories of several thousand km^2? If the relatively large towns of Roman Thrace struggled to maintain order on their territories, towns such as *Horreum Margi* or *Volgum* were surely ill-prepared to govern territories in excess of 2,000–3,000 km^2. Adding to the confusion was the realisation that many of the large towns had average-sized or even small territories. There is no positive correlation between settlement size and territorial size in this study region. Why did the large territories of the 'small *municipia*' fail to translate into perceptible urban growth?

The example of the Flavian *municipium* of *Doclea* in the south of Dalmatia hinted at a possible solution to this puzzle.[50] Like *Delminium*, this *municipium* was eponymous of the Dalmatian tribe of the *Docleatae*, a people recorded by Pliny the Elder.[51] At the time of the conquest of Dalmatia, they counted only 33 *decuriae*. Accepting the conventional view that one *decuria* was made up of 100 to 150 individuals, it turns out that the *civitas* of the *Docleatae* had a population of 3,500 to 4,000.[52] Arguably, it is conceivable that besides the *civitas* of the *Docleatae*, the *municipium* also comprised the territories of other *civitates*, but if that was the case, the latter must have been even smaller than the *Docleatae*.

Doclea does not deserve the label of 'small *municipium*'. It was among the largest towns in the Dalmatian interior, equipped with all the amenities usually associated with a Classical town.[53] Its *curia* and individual magistrates are well-represented in the local epigraphic corpus, and there is good evidence of the presence of professional associations.[54] The inscriptions referring to the town and its magistrates were for the greater part discovered at the site of the *municipium* and its necropoleis. However, one epitaph found at a distance of over 60 km from the municipal centre is of crucial importance for the recon-

50 Alföldy 1965; Wilkes 1969.
51 Plin. *NH* 3.143.
52 Gabričević 1953: 103–119; Bojanovski 1988.
53 Srejović 1968: 89–99; Kuzmanović-Cermanović, Velimirović-Žižić and Srejović 1975.
54 *AE* 1904, 89; *AE* 1905, 47.

struction of the municipal territory (Fig. 12.7).[55] It is a funerary monument of a *princeps* of the *Docleatae* and his family, based in a *castellum* in the territory of this people. This inscription provides us with a secure coordinate for the northern extent of the *Docleatae*. In conjunction with the geographic divisions and the distribution of the neighbouring towns, they extend *Doclea*'s territory over an area of about 5,000 km^2.

Going back to the information in Pliny that the *Docleatae* numbered 33 *decuriae* or fewer than 5,000 inhabitants, it can be inferred that the population density in the territory of the *municipium* was lower than one inhabitant per km^2. This is an unsurprising revelation to anyone vaguely familiar with the geography of modern Montenegro. This is a land of high mountains and inhospitable karstic plateaus, especially in the northern and central parts of the country, roughly coinciding with the territory of *Doclea*. Even in modern times the population density in these parts of Montenegro was lower than 20 inhabitants per km^2.[56] In such conditions, neither the demographic base nor the economic resources necessary for the emergence of other urban centres were present in the land of the *Docleatae*. Although large in absolute terms, one administrative centre was sufficient to secure the normal functioning of the local government on the territory of the *Docleatae*. A denser urban network would have been both unsustainable and unnecessary.

This negative correlation between population density and territorial size is supported by the evidence from later and better-documented historical periods. Prior to the founding of the modern nation states of Yugoslavia and Albania, the chief central place for the herding population that inhabited the mountains of northern Albania was Djakovica, in the southwest corner of the Metohija Plain (Fig. 12.8).[57] After the establishment of the state frontier between Albania and Yugoslavia, Djakovica and the Metohija Plain fell on the Yugoslav side of the border. This political event forced the Albanian herders to look for an alternative market for their products in Shkodër, over 70 km to the west of Djakovica. In this rugged and inaccessible part of the peninsula there were simply no other alternatives. It is surely not by accident that the territory of *Scodra*, the Roman predecessor of modern Shkodër, spread over an area of at least 3,500 km^2 according to the Thiessen polygons.

The intricate relationships between population density and territorial size are most clearly brought forward by juxtaposing the maps of modern administrative divisions and population densities in early-twentieth-century Albania

55 *AE* 1910, 101.
56 *Yugoslavia* I, 1944.
57 *Albania*, 1945.

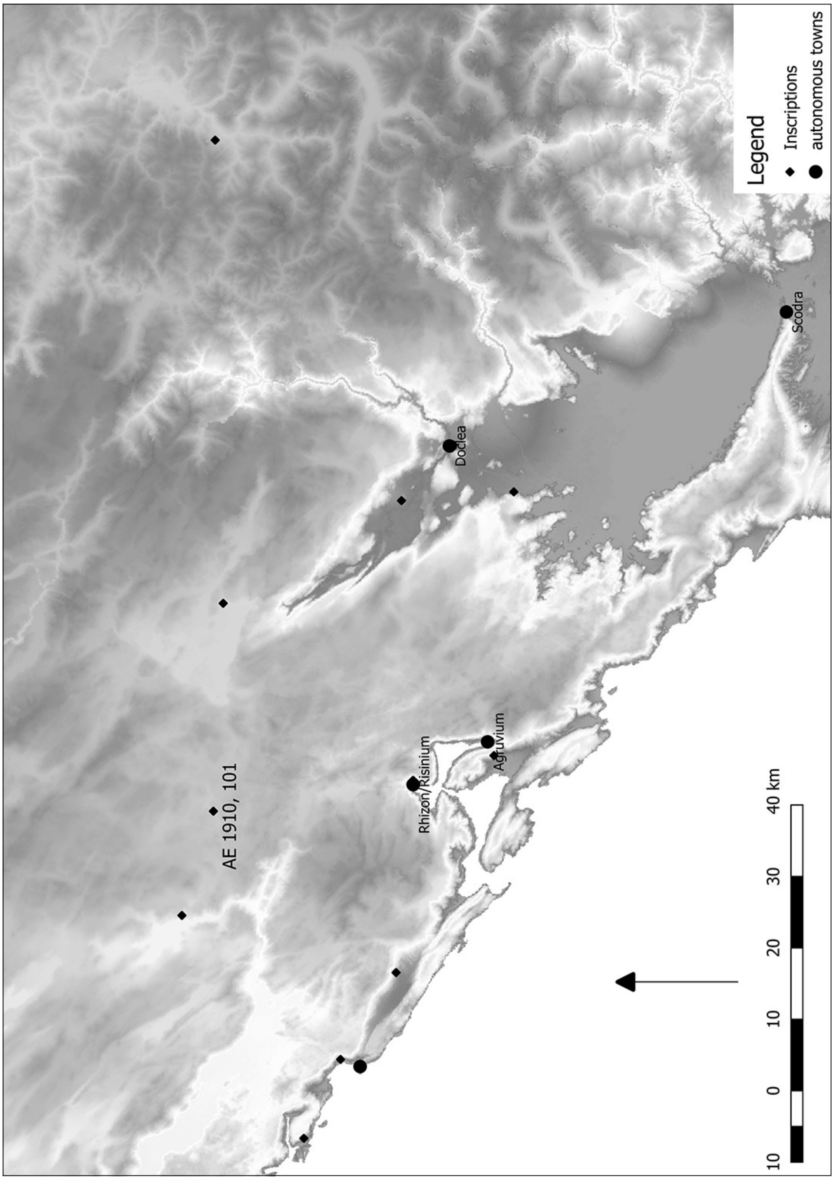

FIGURE 12.7 *Doclea* and the inscriptions referring to the town or its *curia*

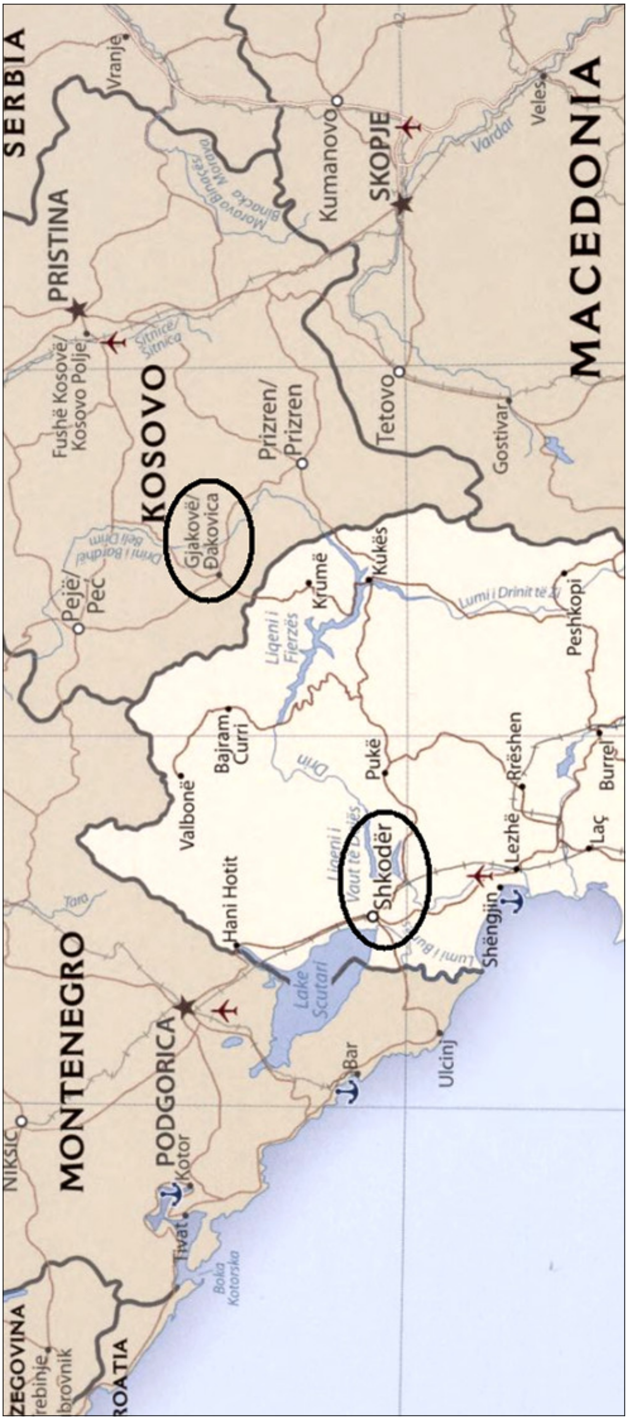

FIGURE 12.8 Map of northern Albania and Kosovo

and Yugoslavia.[58] Despite the general tendency to create administrative units of roughly equal size, there is an apparent coincidence between the large regions and zones of low population density. The smallest districts in early-twentieth-century Albania were centred on the two largest towns, Tirana and Durrës, whereas the largest administrative units were located in the mountainous periphery of the country. A very similar map is produced when one draws Thiessen polygons around the autonomous towns in this area in the period of Antiquity. The largest territorial units in early-twentieth-century Yugoslavia were spread over the zones of population density below 50 inhabitants per km^2. Predictably, this zone coincides with the Dinaric Alps in the western half of the country, the area that in Antiquity belonged to the Dalmatian interior and in which we have identified a number of 'small *municipia*'.

From a theoretical point of view, the principle that links territorial size to population density is fairly convincing. Unless they were fertile and well populated, large territories would not have been correlated with urban growth or prosperity. In fact, the task of governing extensive territories that included difficult terrain must have been expensive and must have brought little in return. The costs of maintaining the road network in the municipal territories tended to rise with increased territorial size, but revenues from taxes and rents would have been low if the urban territory consisted of mountainous and sparsely populated land. This postulate goes a long way towards explaining the paradox of having 'small *municipia*' with oversized territories. Because of the scarcity of human and natural resources in the territories of these towns, they could barely survive without the support from the larger and wealthier towns or the provincial government. Whereas the territories of the largest Roman colonies in this region were often fragmented into smaller units over the course of time, no new towns emerged on the territories of the 'small *municipia*'.[59] Many of them disappeared in Late Antiquity, never to be reoccupied in later historical periods.

The large territorial size of the towns in the economically marginal parts of the study region also makes sense when one considers the fact that municipal charters were granted only to communities which could constitute a council made up of local landowners.[60] This would have been nearly impossible in the remote and mountainous corners of the Balkan Peninsula, unless the urban territories were overstretched to ensure the inclusion of a sufficient number of

58 *Albania*, 1945: Figures 25 and 41, see also Table 1 on p. 129; *Yugoslavia* III, 1944: Figures 1 and 67.

59 Cf. the example of the Dalmatian capital *Salona*, Bojanovski 1977: 83–151.

60 Galsterer 2000: 344–360.

wealthy men.[61] Areas of low population density were therefore anything but conducive to the emergence of self-governing towns in the period of the High Empire. Autonomous towns were expected to be largely self-sustainable, and these conditions were not available in every part of the Roman Empire. It is perhaps not by accident that in many of these areas urbanism returned only in the High Middle Ages, with the establishment of the first stable monarchies. These were minor regional centres that could not survive outside the context of small, land-locked polities and without the direct support of the central government.

This aspect of the relationships between settlement size and territorial size is highly indicative of the general character of Roman urbanism in the Balkan and Danube provinces. The principal role of the autonomous town in this part of the Roman Empire was the administration of justice and levying of taxes. The network of autonomous towns was too sparse to provide efficient market and religious services to the rural segment of the population. Located on the edges of their vast territories, towns such as *Mogentiana* or *Malvesia* could not be reached on foot from the far corners of their territories within a day. In most of these provinces the distribution of the autonomous towns reveals a pressing concern to secure full administrative coverage of the provincial territories. Mócsy was right in observing that the general tendency was to install self-governing institutions even in areas in which the right environmental, demographic and cultural conditions had not been met.

The strategy of extending the administrative outreach of certain towns can be read in the same vein. This was a necessary measure, both to extend the municipal umbrella and to secure a sizeable body of wealthy, emancipated men to carry the burden of self-government. These central places functioned primarily as the bases of the local government and, by extension, of the provincial authorities. They were not a result of organic growth and cannot be understood properly by looking at their positions in the wider urban networks or the natural riches and size of their territories.

While it seems reasonable to posit the existence of these causal connections, it must be admitted that a lack of adequate data makes it difficult to assess population densities in the territories of individual cities. In the case of Dalmatia and certain parts of Epirus, low population densities were inferred from regional environmental conditions. This approach is hardly applicable to all of the 'small *municipia*' in Pannonia or Moesia Superior. Both *Mogentiana* and *Aquae Balissae*—the only two towns for which we have good evidence of their territorial extents—are located in the rugged sections of Pannonia Superior,

61 I am grateful to Prof. Frank Kolb for bringing this connection to my attention.

but this was not the case for *Horreum Margi* in the fertile Morava valley or *Salla* and *Halicanum* on the Amber Road.[62] At the moment, we have no way of telling if population densities were low in the territories of these towns or if their territories were much smaller than predicted by the Thiessen polygons.

It would be going too far to claim that tiny towns with huge administrative territories were to be found exclusively in thinly populated parts of the Roman Empire. Other, non-structural factors must have been equally significant in determining the size of territorial units. Still, the archaeological and epigraphic evidence relating to several of the 'small *municipia*' of the Danubian and Balkan provinces serves as a useful reminder that throughout the Roman world moderately high population densities were a chief prerequisite for urbanisation.

Appendix: A List of 'Small *Municipia*', Their Epigraphic Testimonies and Territories

Name	Num. of epigraphic references	Num. of references to magistrates	Sources	Territorial estimates
Neviodunum	6	1	*AE* 2006, 1031; *CIL* III, 3919, 3921, 3925; *CIL* III, 4616, 4168, 11325	
Salvium	2	1	*ILJug* 2775; *CIL* III, 9860	1,800–2,000 km²
Salla	3	3 (*seivir*)	*ILJug* 1169; *AE* 2004, 1122; *RIU* Suppl. 52	4,400 km²
Novae	3	1	*CIL* III, 1908–1910	1,600–1,800 km²
Aquae Balissae/ Municipium Iasorum	5	1 (*scriba*)	*ILJug* 1132; *AIJ* 586–587; *AE* 2007, 1144; *CIL* III, 4000	5,000–7,000 km²
Diluntum	1	1	*ILJug* 1740	1,800–3,200 km²
Magnum	3	1	*CIL* III, 6565	250–600 km²
Mursella	2–4	2–3 (*scribae*)	*RIU* 372; *CIL* III, 4490; 10243a/b	1,500 km²
Halicanum	1	0		4,000 km²
Spodent	1	1	*ILJug* 1048	1,600–2,700 km²
Bistue	7	7	*ILJug* 101, 103, 1610, 1753, 1755–1756; *CIL* III, 8783	2,200 km²
Volgum	2	2	*RIU* 1244, 1253	5,800 km²
Fausto	1	1 (*scriba*)	*CIL* III, 3974	1,750–2,200 km²
Mogentiana	>12	> 11		3,000–5,000 km²

62 The marshy terrain along the Drava and Zala could have presented a serious deterrent to urbanisation in these regions, Redö 2003: 192–193.

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CHAPTER 13

Between the River and the Fort: Applying Critical Regionalism to Roman Towns in the Pannonian Basin

Dragana Mladenović

1 New Approaches to Roman Urbanism: Critical Regionalism and Place-Making

Critical Regionalism and Place-Making are two new concepts, for archaeology at least, that have recently been applied to the study of Roman urban landscapes. Critical Regionalism is a concept that emerged in architectural theory in the 1980s as a middle ground between International style and Postmodernism, calling for architecture that reflects the culture and tradition of its region and is shaped by the climate, topography, ambiance, art and craft of the place. Critical Regionalism is therefore not a specific style, but a process.[1] For archaeologists the concept as initially outlined and used in architecture seemed to have very little applicability. However, Critical Regionalism has since made a transition to literary, cultural and political studies, where a certain practice is examined within the context of its regional peculiarities,[2] and it is in that same vein that archaeology can have recourse to it. The second theoretical stimulus for this paper is a newly proposed approach to Roman Place-Making, whereby an urban area and its landscape are moulded by its social, cultural, political and economic activities. This approach was the agenda of the first Critical Roman Archaeology Conference held at Stanford University

1 The term Critical Regionalism was first used by Tzonis and Lefaivre 1981 and was further developed mainly through the debate between the authors and the historian and theorist of architecture, Kenneth Frampton (Frampton 1983a; 1983b; Lefaivre and Tzonis 1990; Lefaivre 2003; Frampton 2005). It should also be noted that the concept partially stems out of fear that globalisation will wipe out architectural variety, with Critical Regionalism acting as a strategy of resistance, which makes the concept subtly politicised. Furthermore, as it has also often been applied to developing architecture of postcolonial nations by US and European authors, some see it as 'a revisionary form of imperialist nostalgia' (Jacobs 2003: 14–15). For criticism of the concept see Eggener 2002; Hartoonian 2006.

2 Reichert Powell 2007.

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in March 2008.[3] Tom Morton has already merged these two approaches in a study analysing design practice of urban centres in Roman Africa.[4]

While the potential of the two concepts has been demonstrated in the works cited, not all parts of the Roman Empire provide the quality and quantity of evidence that would allow for the design of specific building types or urban complexes to be studied in the same way. In fact, the cases studied so far are exceptional rather than typical in that respect (e.g. Timgad). Against such background this paper will seek to apply the same approaches, but on a different scale—not on the level of the design of individual buildings or towns, but on the urban form itself. Can one consider regional urban development by using critical urbanism and Place-Making theories, and do any meaningful regional patterns emerge if we investigate how urban landscapes met challenges and changes in their dynamic everyday experience? If so, how do we account for these patterns? Would viewing cities from this particular angle interrogate our current assumptions and expand our understanding of cities whose urban form and function are reasonably known to us? This paper is thus very much an experiment. I am not starting off by saying there is a regional pattern of urban development in the chosen region, though one strongly suspects there must be; instead I set out to establish if there is one, and if so, what factors shaped it.

Morton divides factors that are crucial for urban design into three interconnected groups: location, politics and history/culture.[5] These include, but are not limited to: geography, location (along trade routes, intersections of major roads, etc.), availability of natural resources, economic activity, history of the city and of the province, date of the city's foundation (as well as the circumstances, I would add), the city's status, relations between indigenous and Roman inhabitants, trajectory of the city's inhabitants (whether they rose to prominent positions in the government or the military), the occurrence and frequency of imperial benefactions and a variety of cultural elements (such as religious practices, language, governmental structure; here I would add the presence or absence of the practice of civic euergetism).

It is obviously impossible to examine all, or even most, of the factors which feature on this long list within the scope of this paper. In this contribution only one of Morton's 'locational' factors will be examined, namely the natural setting. In addition, I will concentrate on a single 'historical' factor that Morton did not consider: the presence and involvement of the army, which I believe to have been crucial in the context of my chosen regional case study. Even these

3 Totten and Lafrenz Samuels 2012.
4 Morton 2016.
5 Morton 2016: 283.

two factors cannot be examined in full here. My discussion of the impact of the army on regional urban forms, for example, will focus primarily on the physical development of towns, whereas the socio-cultural impact of the military community will only be briefly touched upon.

2 The Region and Its Cities

A region is an area with boundaries determined by either natural or cultural criteria.[6] As geographic setting, topography and natural resources are among the main determining factors of Critical Regionalism, natural criteria have to be considered in this paper. The inquiries that will be undertaken in this paper will focus on the Pannonian Basin, corresponding to the Middle Danube region and part of its southern catchment area,[7] between the Devin Gate east of Vienna and the Iron Gate Gorge, where the river enters a narrow passage between the Southern Carpathians and the Balkan Mountains. The Pannonian Basin extends beyond the Pannonian Plain and includes the low hilly terrain that borders it, confined by the Carpathians in the north and east, by the Alps in the west and the Dinarides and a section of the Balkan Mountains in the south. While the Roman frontier on the Danube provided an unambiguous boundary to the area under consideration in the north and east, there is no clear-cut line that can be used to delimit the basin in the south and west. In order to create a region that is reasonably homogenous from a geographical point of view, I have chosen to include those sites that were reasonably open to the Pannonian Plain (like *Poetovio*, *Andautonia* and *Siscia*) and excluded those where a degree of separation exists (e.g. *Emona*, *Noviodunum*, and *Ovilava*). Although some material will be introduced from areas up- and downstream and further inland when appropriate, sites beyond this geographical scope were not included in the dataset.

Furthermore, a choice had to be made as to which sites could be classified as 'cities'. For the purposes of this study this label will be reserved for those settlements that gained a level of autonomous administration during the first three centuries CE, that is to say, for those settlements which were either *municipia* or *coloniae*. In principle the central places of self-governing *civitates* that did not acquire either of these statuses could have been included as well, but in

6 On the difficulties of defining a region as a unit of analysis in historical studies, see Kramer 2012.

7 For the geographical definition of the extent of the Middle Danube, see Schiller, Miklós and Sass 2010: 35.

the survey area there are none that continue much beyond the period of conquest and whose archaeology is sufficiently known to be able to contribute to the larger picture.[8] For sites whose status is unclear, I have followed the current scholarly consensus.[9]

Based on these criteria, the following sites have been included in the study (from north to south): *Vindobona*, *Carnuntum*, *Scarbantia*, *Mursella*, *Brigetio*, *Aquincum*, *Savaria*, *Mogetiana*, *Gorsium*, *Poetovio*, *Salla*, *Tricciana*, *Andautonia*, *Siscia*, *Aquae Balissae/ Municipium Iasorum*, *Mursa*, *Cibalae*, *Sirmium*, *Bassianae*, *Singidunum*, *Viminacium* and *Margum* (Fig. 13.1). During the second century CE these were the cities of Noricum, Pannonia Superior, Pannonia Inferior and Moesia Superior.

While the dataset might seem sizable, considerable variations in the level of research undertaken at each of the sites means they do not all furnish us with the same quantity of evidence or level of detail.[10] Quite a number

8 Numerous *civitates* are attested in the area (Kovács 2013: 133–136), and many in the vicinity of Roman towns (e.g. *civitas Boiorum* and *civitas Erauiscorum*, the former in the vicinity of *Carnuntum*, the latter in that of *Aquincum*), but the *civitas* capital of either is unknown. For an attempt to establish the whereabouts of the central settlement of the *civitas Iouia*, see Gregl and Migotti 2004.

9 E.g., *Volgum*'s status as a *municipium* is supported by inscriptions of uncertain reading found at *Intercisa* (*RIU* 1244, 1253), but since this evidence is largely dismissed in current scholarship (Tóth 1986), this town has not been taken into consideration here. The fact that we know nothing of its location or remains would in any case make it unsuitable for inclusion in this study. On the other hand, while there is no direct proof of *Gorsium* having been promoted to the status of a self-governing city, strong circumstantial evidence has led researchers to consider it as such (Alföldy 1997; Fitz 1999: 198; Fishwick 2000). *Tricciana* is a similar case (Mócsy 1974: 222, 305 ff.). *Arrabona*, *Sopianae/Sopianis* and *Bassiana* in Pannonia Superior have been excluded because they were only *stationes*. It should be said that reversal of any of these choices would have only a negligible impact on the dataset, as features that will be discussed in the paper can equally be found in some of the excluded sites.

10 The paper does not aim to provide an exhaustive list of site bibliographies for each of the cities considered. While sources of specific information will be cited throughout, general information on the sites comes from the following works which also offer the most recent overviews of archaeology for each of the sites and further detailed bibliography: *Vindobona* (Mader 2004), *Carnuntum* (Kandler 2004), *Scarbantia* (Gömöri 2003), *Mursella* (Szőnyi 2004), *Brigetio* (Borhy 2004), *Aquincum* (Zsidi 2004b), *Savaria* (Scherrer 2003), *Mogetiana* (Nagy 2004), *Gorsium* (Fitz 2004), *Poetovio* (Horvat et al. 2003), *Salla* (Redő 2003), *Tricciana* (Mócsy 1974: 305 ff.), *Andautonia* (Nemeth-Ehrlich and Kušan Špalj 2003), *Siscia* (Lolić 2003), *Aquae Balissae/Municipium Iasorum* (Schejbal 2004), *Mursa* (Filipović 2004), *Cibalae* (Iskra-Janošić 2004), *Sirmium* (Mirković 2004), *Bassianae* (Milin 2004), *Singidunum* (Mladenović 2012: nos. 105–124), *Viminacium* (Spasić-Djurić 2002; Mladenović 2012: nos. 748–770) and *Margum* (Mladenović 2012: no. 413).

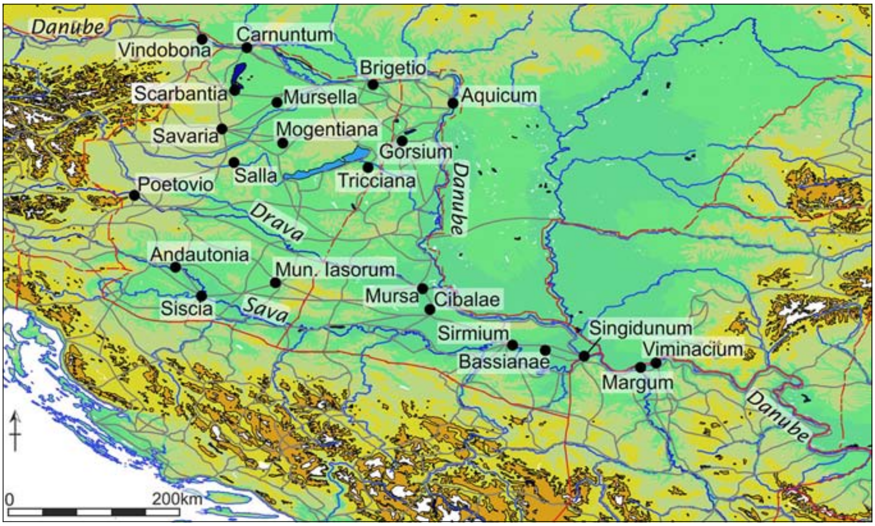

FIGURE 13.1 Roman towns in the Pannonian Basin
MAP BY THE AUTHOR

of sites are completely covered by modern urban agglomerations (e.g. *Vindobona*, *Aquincum*, *Savaria*, *Siscia*, *Municipium Iasorum*, *Mursa*, *Cibalae*, *Sirmium*, *Singidunum*), and these include the three largest towns of the region (Vienna-*Vindobona*, Budapest-*Aquincum* and Belgrade-*Singidunum*), significantly hampering research. Other sites remain accessible to varying degrees, with only *Carnuntum*, *Mursella*, *Gorsium* and *Viminacium* remaining largely available for investigation. Different local scholarly traditions and levels of past research create further variations in the dataset.

3 Phases of Urbanisation

The Pannonian Basin was conquered mainly during the time of Augustus and consolidated in the first decades CE. Although the region was divided into different provinces, whose boundaries changed a number of times in the early years of occupation, the observable urbanisation phases are common to the whole region (Table 13.1).[11]

11 There is much good scholarship on the subject of urbanism in Noricum, Pannonia and Moesia Superior. Recent overviews include Fitz 2003; Mirković 2005; Šašel Kos 2010. For historical events in the region and a general overview of archaeological evidence Alföldy

TABLE 13.1 Establishment of autonomous cities in the Pannonian Basin

Date	*Municipium*	*Colonia*
Julio-Claudian		*Savaria* (Claudius)
Vespasian/Flavian	*Andautonia, Scarbantia*	*Siscia, Sirmium*
Trajan		*Poetovio*
Trajan/Hadrian	*Carnuntum, Aquincum, Mogetiana, Salla, Viminacium, Mursella, Gorsium, Cibalae, Tricciana, Bassianae, Singidunum, Mun. Iasorum*	*Mursa*
Marcus Aurelius	*Margum*	
Severan	*Vindobona* (Severus)	*Carnuntum, Aquincum, Cibalae, Brigetio*(?), refoundation of *Siscia* (Severus), *Bassianae* (Caracalla)
Gordian III		*Singidunum, Viminacium*

Under the Julio-Claudians, we hear of only one urban centre in the region, *Savaria*, a Claudian veteran colony. Instead, the urbanisation of the region begins in earnest with Vespasian, who founded colonies and awarded municipal rights to towns situated either along the Amber Road (*Scarbantia*) or along the road following the Sava that linked Italy with the East (*Andautonia, Siscia* and *Sirmium*). This Flavian urbanisation comes comparatively late. Not counting Dacia, conquered a hundred years later than the study area, this is the latest onset of urbanisation anywhere in the empire. There is no clear evidence of imperial gifts of public buildings accompanying any of the Flavian promotions.

The next wave of urbanisation took place under Hadrian, preceded only by a single grant of city status from Trajan, who turned the former legionary centre of *Poetovio* into a colony and donated the forum buildings on the occasion.[12] Hadrian, on the other hand, founded one colony (*Mursa*, one of the last colonies to be created anywhere in the empire) and perhaps as many as 12 *municipia* (*Carnuntum*, *Aquincum*, *Mogetiana*, *Salla*, *Viminacium* and most likely also *Mursella*, *Gorsium*, *Cibalae*, *Tricciana*, *Bassianae*, *Singidunum* and

1974 and Mócsy 1974 are still unsurpassed, though both are slowly becoming obsolete. A review of recent developments and further bibliography can be found in Wilkes 2005.

12 Mráv 2000.

Municipium Iasorum). The bestowal of privileged statuses on settlements was one of the clear policies of Hadrian's reign, conducted most intensively in North Africa and along the Danube.[13] This policy was motivated by a perceived need to develop the administrative network of the empire. The *municipia* that received their status under Hadrian show large variations in size, population, basic civic infrastructure and amenities,[14] and the archaeology of the cities in the study area indicates that many of these promotions may be described more as 'aspirational' than as formal recognitions of processes of urban development and expansion that had already taken place. Hadrian, who spent much of his military and civic career in the region (first as a military tribune in *II Adiutrix* in Pannonia in 94/95 CE, then as a legionary commander in the Dacian wars, and finally as a praetorian legate and governor of the province of Pannonia Inferior in 106–108 CE), would have been well aware of this, and the numerous public buildings which he donated to communities in the Pannonian Basin were likely intended to remedy the situation.[15] Promotions of settlements to the rank of self-governing cities would have been much more than a mere mark of prestige.[16] They would have impacted political life and local citizenship (though no citizenship grants are evident, and the majority of attested magistrates and *ordo* members are Roman citizens from elsewhere) and would have stimulated the communities in question to develop political and social relations similar to those existing among urban populations elsewhere in the empire. Most communities of the region would have undergone this transformative process at the same time, following Hadrian's generous municipalisation policy.

Peaceful developments on the Danube were disrupted by the outbreak of the Marcomannic wars, which brought destruction to urban settlements that got caught up in military operations (*Savaria*, *Gorsium*, *Salla*, *Andautonia*, *Cibalae*, *Brigetio* and *Scarbantia* all show clear signs of destruction in this period). The reign of the Severi was a time of renewed prosperity for these cities, likely due to the close bond between the Severans and the Danube region, particularly Pannonia, where the troops had proclaimed Severus as emperor.[17] Under Septimius Severus, *Carnuntum* and *Aquincum*, both of which had been Severan strongholds in the civil war, were given colonial status, as was *Cibalae* and possibly also *Brigetio* (whether the city received municipal or colonial status is unclear), while *Vindobona* was made a *municipium*. The Flavian colony of

13 Boatwright 2003: 38–41.
14 Boatwright 2003: 41.
15 Mráv 2003.
16 See Boatwright 2003: Ch. 3.
17 Mráv 2013.

Siscia was refounded in this period, now as *colonia Septimia Siscia Augusta*. Finally, under Caracalla, *Bassianae* became a colony. Generosity of the dynasty to the towns of the region was expressed through building benefactions as well.[18] These gifts seem to have encouraged civic euergetism of the local municipal élites,[19] contributing to the urban development in the region.

The civic and military constructions of the Severan era represent the pinnacle in urban building activity. Although the events of the third century do not seem to have caused as much disruption on the Middle Danube as recorded elsewhere,[20] the majority of the cities clearly display a downward trajectory from this period onwards. A notable exception is *Sirmium*, the birthplace of several third-century emperors, which became the residence of the governor of Lower Pannonia and later the capital of Illyricum, consequently receiving an imperial palace with a hippodrome and numerous other structures in this period.[21] Under Gordian III *Singidunum* and *Viminacium* were made *coloniae* in an honorific move that does not seem to have had any visible impact on these towns. The third and fourth centuries would bring destructive raids by various Germanic peoples that affected all of the towns in the region. The final blow for the cities that survived these onslaughts came from the Hunnic offensive, following which the majority of the cities in the study region were lost to the empire.

4 The Impact of Fluvial Landscapes

Almost all of the cities in the region were located on rivers (cf. Fig. 13.1), with only four being founded at a different location. Of these four cities *Savaria* was situated at a major intersection on the Amber Road, *Bassianae* was an important station on the *via militaris* between Italy and the East, the location of *Municipium Iasorum* (also known as *Aquae Balissae*) was clearly predicated by the mineral springs, while the exact location of *Mogetiana* is not known.

The locations of riverine cities were equally not random. The majority were situated near convenient river crossings (as confirmed at *Carnuntum*, *Brigetio*, *Aquincum*, *Mursella*, *Gorsium*, *Salla*, *Poetovio*, *Andautonia*, *Siscia*, *Mursa*, *Sirmium*, *Singidunum* and *Margum*), while others were at located intersections of the roads following the rivers (e.g. *Vindobona*, *Cibalae*, *Viminacium*) with other

18 Mráv 2012.
19 See Mladenović 2011; Mráv 2013: n. 122 for examples.
20 Cf. Fitz 1982; Ørsted 1985, 365–372; Wilkes 2005: 160–161.
21 Popović 2007.

roads. Cities belonging to the latter group were likely equipped with facilities to cross the river as well, for instance with ferries. The local rivers, to be discussed below, were wide, shallow and marshy and could be crossed safely only in a few places. Such places were regarded as premium locations for settlement. For example, *Siscia* is one of only three attested places where the Sava could be crossed for almost 200 km in Antiquity.[22] Almost all cities were major or minor nodes in the road network. At least some of the roads which made up this network were very old. The Amber Road, whose trajectory is attested far back into prehistory, was paved at the beginning of the first century and became a *via militaris* no later than under Claudius, with several minor roads also being constructed already in the first century.[23] It is thus not surprising that almost all of the considered locations have at some point seen strategic garrisoning of troops, as will be discussed in the next section, with the aim of controlling river confluences and crossings and associated transport routes.[24] The strategic decisions which were made in choosing the locations of these sites, and the development of the road network linking major military frontier posts to the communication network foci in the provincial hinterland,[25] were moulded by environmental site features, such as the availability of higher ground protected from floods or the availability of river crossings.

The fluvial landscape in which the cities of the Pannonian Basin developed has not received as much consideration as similar environments elsewhere in the Roman world, either as a factor shaping human activity or from a paleo-environmental perspective.[26] Riverine landscapes are dynamic environments (the size and strength of the river can change seasonally and river courses can change over time), inducing a two-way interaction between men and the environment. Central to this paper is the Danube, the second largest European river in terms of mean water discharge, and parts of its catchment to the south, mainly the Sava and the Drava with their tributaries. Together they constitute an active and challenging fluvial system comprising meandering waterways

22 Durman 1992: 120.

23 For a convenient overview, see Wilkes 2005: 147 and the Appendix.

24 For a Roman preference for riverine sites in the establishment of *castra* and colonies, see Campbell 2012: 167–177.

25 An analysis of the factors behind the establishment of the communications networks in Pannonia can be found in Burghardt 1979.

26 The only regional comprehensive study of this kind is Kérdő and Schweitzer 2014, relating to the environment and archaeology of *Aquincum*. For recent work on the significance of rivers and riverine landscapes in the Roman period and archaeological approaches to the study of rivers, see Edgeworth 2011; Campbell 2012; Rogers 2013; Franconi 2017a.

prone to flooding and fertile riverine plains with high subterranean waters making marshland very common. Floods, caused by spring-time snowmelt and heavy atmospheric precipitation, were an annual occurrence, disrupting life and communication routes at different times of the year. Rivers further to the west and under the influence of the Mediterranean reach their maximum water discharge in winter (e.g. the Sava), while the flow of the Danube often peaks only in spring.[27]

We know both from paleo-environmental reconstructions and hydrological research that the situation was no better back in the days of the empire.[28] If anything, Roman actions are likely to have made the situation worse compared to the Iron Age period. Agricultural intensification, deforestation and population growth tended to exacerbate erosion, increasing sedimentation rates and leading to heavier flooding. This phenomenon has been observed on a number of European and Asian rivers in the Roman period.[29] The situation was further aggravated by the subtle climatic change that affected the Pannonian Basin from the turn of the second to the third century CE, when after a spell of dry climate of the Sub-Mediterranean type, the climate turned cooler and wetter.[30] Indeed, there is hardly a site included in this study that does not show evidence of flooding. At *Salla*, frequent floods have created a 2 metre-thick flood deposit at the site of the river crossing, with a particularly devastating flood recorded as a yellow clay layer which has been dated to the period between the Hadrianic and Antonine phases of the settlement.[31] It is likely that the same catastrophic flood destroyed *Andautonia* in the 120s CE, with another flood of similar intensity devastating the site again at the end of the third century and leaving behind a thick layer of gravel.[32] The site of the military camp of *Brigetio* was likely moved because of frequent river floods.[33]

In the Roman period various anthropogenic interventions were used to combat such adverse conditions: water-course alteration (e.g. altering the course of waterways within the city, be it the main river or secondary water courses), wetland drainage and reclamation (through dumping material and consolidation)

27 Kovács 2010: 158–161.
28 For paleogeography of the Danube catchment, see Miklós and Neppel 2010.
29 Wendt and Zimmermann 2008; Wendt, Hilpert and Zimmermann 2010 (the Rhine); Provansal et al. 2003 (the Rhône); Lewin 2010: 295; Macklin, Lewin and Jones 2014: 33–36 (Roman Britain); Stock et al. 2016 (Roman East); for other examples see Franconi 2017b: 13.
30 Láng and Schweitzer 2014.
31 Redő 2003: 192, 208.
32 Nemeth-Ehrlich and Kušan Špalj 2003: 118–121.
33 Visy 2011.

and embankment construction.[34] Full appreciation of such works is possible only through a combination of archaeology and geo-archaeology, which is also required in order to be able to reconstruct the ancient landscape. For the Pannonian Basin such interdisciplinary studies are unfortunately largely lacking. The only comprehensive study incorporating paleo-environmental data, geology and archaeology deals with *Aquincum*.[35] This study is an excellent illustration of the scale and scope not only of the problem but also of the Roman responses.

The reconstructed river beds and hydrography at *Aquincum* show that in the Roman period the Danube was wider and shallower and the shoreline more dissected, containing more river islands, more marshes and numerous water courses and springs (Fig. 13.2).[36] This was an ever-changing landscape as well, with the river eroding its right bank and depositing its load on the left one, causing perhaps as big a change as detaching the so-called Small Island (Kis-sziget) from Óbuda (Hajógyári) Island (on which the governor's palace was built) near the right bank during the Roman period, though at this moment we cannot rule out the possibility that this separation was brought about through artificial means.

To make the area suitably habitable, the Romans needed to undertake extensive landscaping work in and around *Aquincum*. With the primary concern being flooding, the legionary fort, most of the military town and the road connecting the two were situated above the lower flood plain. Villa farms in the town's vicinity were also built on elevated sand ridges. To increase the available habitable land, marshy areas were drained and filled in. The archaeological record shows that portions of the civil town were situated on marshland reclaimed in this way.[37] In addition to dumping large amounts of soil, drainage and regulation of streams that flowed from countless springs in the hills flanking the right bank were required for land reclamation. Ditches for draining excess water as well as channels designed to lead off waters of springs capped by Roman engineers have been identified in several locations, and it is further believed that two ditches running along the town wall were also part of the drainage strategy.[38] The industrial area in the western part of the military town,

34 On similar measures undertaken in historical times in the same region, see Stančíková 2010. For efforts of cities of the lower Rhône and Britain, see Allinne 2007; Rogers 2013.

35 Kérdő and Schweitzer 2014.

36 Schweitzer 2014a.

37 Zsidi 1995: 215.

38 Zsidi 2014b. Such a solution was certainly not uncommon; an example of a similar system of ditches dug to conduct meteoric water and drain the surroundings has been registered at *Poetovio* (Horvat et al. 2003: 167).

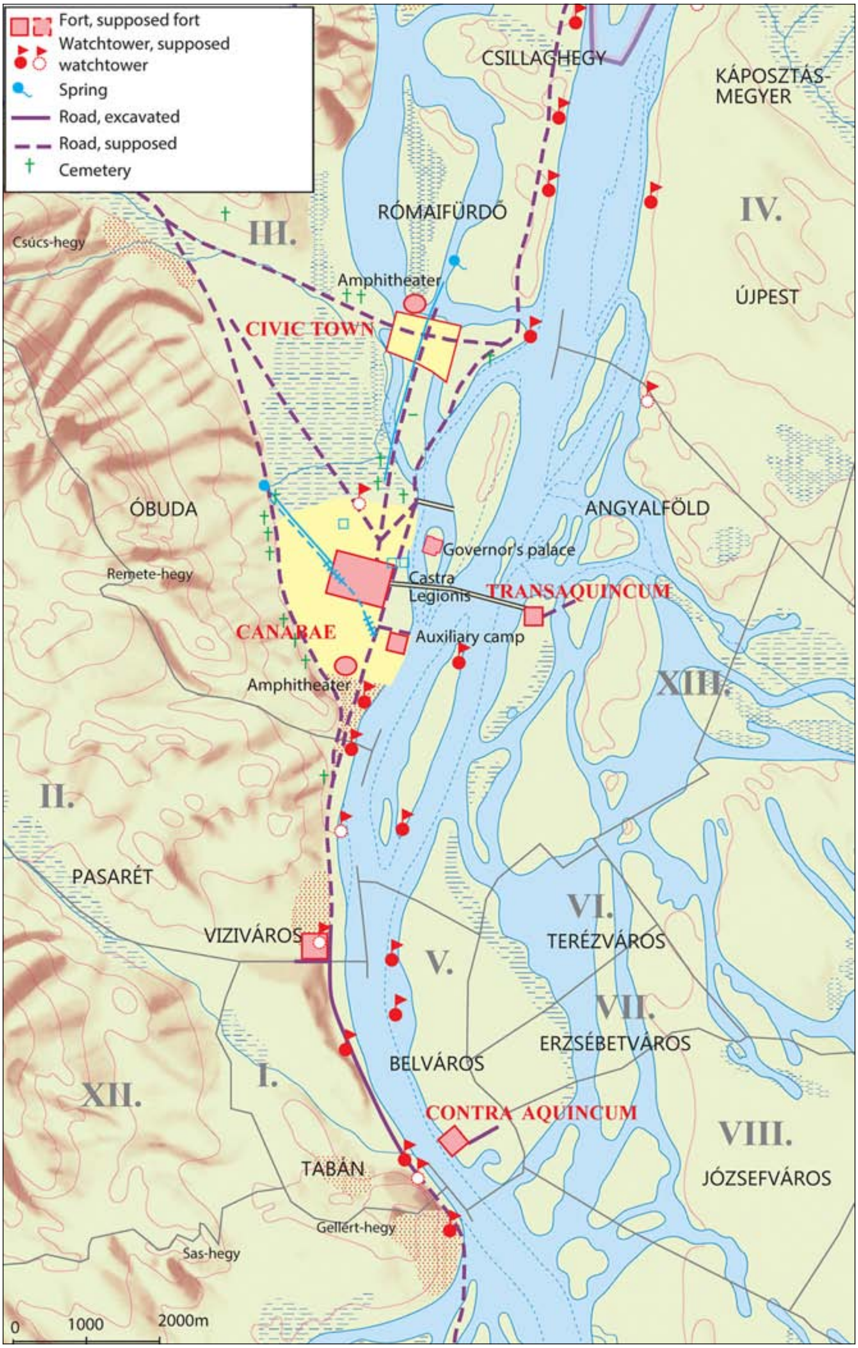

FIGURE 13.2 *Aquincum*, reconstruction of Roman period environment and hydrography
AFTER KÉRDŐ AND SCHWEITZER 2014: FIG. 34

as well as the eastern cemetery of the civil town and the northern cemetery of the military town were all established on reclaimed land.[39]

It is unclear what measures were put in place to combat flooding. Flood levees, artificial raised and revetted embankments designed to protect against high water are to be expected,[40] but with the movement of river beds and regulation of river banks in modern times much of the evidence has been lost. Several theories have been put forward suggesting either a system of embankments and quays or a sophisticated drainage system,[41] and though the answer evades us, it is clear that some measures were put in place and that they were reasonably effective. No traces of floods have been observed in the civil town, an area that had to be abandoned to marshlands in the medieval period and required major quay construction in the nineteenth century before it could be re-occupied.[42] Even so, the Danube flooded the *Aquincum* legionary fort on a number of occasions, and the constant high water of the Danube led to the abandonment of the governor's palace on Óbudai Island in the last third of the third century,[43] exposing the limitations of human efforts. Cities could evidently deal successfully with regular floods, but not with the rare large inundations referred to in modern regional hydrology as '100-year discharge events' that modern flood protection is designed to tackle.[44]

Equally uncertain is what measures were undertaken to combat weathering of riverbanks by the actions of river flow, ice, flood surges, etc., which must have been quite pronounced as we know the Danube riverbed was shifting laterally and wearing away the right bank. Revetments designed to protect the banks are very likely to have been used, and faint traces of pole embankment construction found on the Óbudai Island (e.g. the Gas Factory site) might well represent the remains of such an effort.[45] We have no way of knowing if vegetation planting (willows are known to be particularly effective) or flow-guiding measures (e.g. employment of groynes or sills), both used in later periods,[46] were attempted. If the canal that separated Kis Island from the rest of Óbudai was man-made,[47] it could have been a part of such a system, though it would

39 Kirchhof 2009.
40 Stančíková 2010: 308–309.
41 Zsidi 2011: 259–260.
42 Zsidi 2011: 260.
43 Kérdő 2014: 114.
44 Stančíková 2010: 308–309.
45 Kérdő 2014; Zsidi 2014a.
46 Stančíková 2010: 308–309.
47 For geological evidence, see Schweitzer 2014b, for archaeological Kérdő 2014: 112–113, 121–122.

have required constant maintenance due to silting. Sedimentation would have affected any waterway, canal or harbour facility, requiring regular dredging. Unattended, the process could result in rivers migrating away from the city. This was not an uncommon situation. Settlements on the Rhine and the Rhône had to deal with the same challenges, as did Rome itself.[48] Even though no evidence of Roman-period dredging has ever been uncovered in the study area, we must assume that it was undertaken.

Of all the challenges of riverside existence, slow destruction by meandering river courses was certainly the calamity that the Romans were least effective against. Since Antiquity, shifting riverbeds have caused the destruction of many Roman settlements. Within the research area all Roman sites between Gönyű and Komárno/Komárom have been washed away by the Danube,[49] and the gradual change of watercourses poses problems for those wishing to preserve and present the excavated remains of some of the sites here studied, such as at *Andautonia*. While most of these shifts were gradual, more dramatic changes to the river course occurred as well. At *Poetovio*, where a section of the site more than 200 m. wide has been washed away through the meandering of the Drava since Antiquity, remains of a fourth-century rebuilding phase seem to indicate a relatively sudden change in the river course in the late third century necessitating re-orientation of many of the structures.[50]

In conjunction with the riverine locations of these settlements, the measures undertaken to combat flooding and erosion of river banks would have given these cities a distinctive appearance and outlook. Their 'urban waterscapes',[51] consisting of rivers, other watercourses, man-made ditches and surrounding wetlands, not only dictated land use but also formed a part of the experience of these settlements. Cities would have shared certain components of the cityscape, like waterfronts and river crossings in the form of bridges, causeways or ferry crossings. With all of the related rivers being navigable, some harbour facilities are to be expected, be it in the form of floating jetties or of more significant harbour constructions.[52] Similarities and regional patterns in the urban fabric are likely to have existed but are difficult to establish at this stage as these are some of the least known urban components, mainly due to riverine destruction.

48 Aldrete 2007; Bravard 2017; Franconi 2017c; Leveau 2017.
49 Miklós and Neppel 2010: 117.
50 Horvat et al. 2003: 183.
51 For a study of urban waterscapes in Britain, see Rogers 2013.
52 For possible evidence of a floating jetty from *Siscia*, see Gaspari, Erič and Šmalcelj 2006: 285–286.

Adaptations to the riverine living conditions created not only distinct urban landscapes, but also novel constructional and architectural solutions. For example, at *Siscia*, precariously placed on a narrow strip of land between two rivers at the confluence of the Kupa and the Sava, land reclamation and the construction of the town were facilitated by the insertion of oak posts 4–7 metres deep into the marshy soil to stabilise it.[53] Dendrochronology dates them to first-to-fourth centuries, showing that they were maintained and replaced regularly. At *Andautonia*, builders went to great lengths to protect the structures from humidity and damp. A gravel layer of at least 50 cm was added to wall foundations to facilitate drainage, while vertical rows of tubular ducts were incorporated into the core of walls to alleviate humidity, with layers of mortar added to disrupt capillary humidity flows inside the walls.[54] There is no evidence of either adaptation having pre-Roman predecessors: in the late Iron Age at *Siscia*, lake-side-type dwellings on wooden poles were used in the same inhospitable environments, and the construction techniques used at *Andautonia* were previously unknown.[55]

Though cities could and did apply all the described measures to transform and protect the urban core, and with some success, there was very little that they could do about conditions in the wider countryside, which was characterised by wetlands and swamps. Etymological studies suggest that many place names, including the name Pannonia itself, were derived from words designating marshlands.[56] Despite all efforts of drainage, the marshes often came right up to the city walls. At *Sirmium*, for instance, marshland clearly limited the spread of the town, and at *Aquincum* a broad stretch of land in the western part of the city was left uninhabited due to particularly deep marshes.[57] Sometimes Roman actions made the situation in non-urban areas worse rather than better, as at *Brigetio* where the system of flood defence included an embankment with floodgates designed to control the water level by flooding the surrounding countryside in order to alleviate the flood danger facing the city and the legionary camp.[58] In 14 CE we hear complaints of veterans in western Pannonia who felt hard done by for being settled in this land of swamps and wastelands (Tac. *Ann.* 1.17). Marshes in fact dominated the local landscape well into

53 Burkowsky and Bugar 2000: 10–11; Tatjana Lolić 2018, private communication.

54 Nemeth-Ehrlich and Kušan Špalj 2003: 120; Dora Kušan Špalj 2018, private communication.

55 Lolić 2003: 138.

56 E.g. *Mursa*, *Mursella*, *Sirmium*, cf. Anreiter 2001; Šimunović 2013.

57 The emperor Probus tried to alleviate the situation of *Sirmium* by employing the army to dig ditches (*SHA Prob.* 21); for *Aquincum*, Zsidi 1995: 215.

58 Viczián et al. 2013.

modern times, when large-scale drainage efforts first by the Austro-Hungarian Empire and then by modern nation states managed to reclaim the land.

An aspect that is rarely considered is the impact of such living conditions on human health. Primarily, did the environmental conditions result in malaria? No sources confirm it, but the conditions were certainly optimal, and malaria was prevalent in the Pannonian Basin well into the twentieth century when sustained efforts were made to eradicate it.[59] While the Romans did not have a clear understanding of the cause of malaria (or of a link between its spread and mosquitoes), they did understand that marshy environments were unhealthy and tried to avoid them when possible.[60] Some of their reclamation efforts might have been undertaken with health benefits in mind, but their success was clearly limited, and for frontier towns facing the wastes of *Barbaricum* on the left bank, no amount of wetland drainage would have made much difference. It would thus seem likely that malaria was not only present, but also endemic. Proving this is not easy though. Endemic malaria is very powerful in creating certain demographic patterns, mainly by increasing the rate of adult mortality relative to infant and child mortality (nearly halving life-expectancy), as well as resulting in higher total mortality, either due to the disease or to its aggravating effect on other diseases, with figures from the Roman period being very closely mirrored by those from modern Africa.[61] Epigraphic evidence has been used to reveal death patterns that can be linked to malaria in Rome, as the disease usually comes in the form of seasonal outbreaks,[62] particularly in areas that suffered from seasonal floods, which are known to exacerbate the situation. No detailed survey of the regional epigraphic record has been conducted that would reveal such patterns. Gravestones in Pannonia seem to indicate the same mortality models as in other parts of the empire, but skeletal evidence from the same area seems to indicate lower life expectancy in adults than the epigraphic record suggests.[63] This would be typical of malaria, but cannot be conclusively linked to it, particularly as the current research sample is small.

In addition to not being able to significantly change the challenging landscape, the Romans were powerless when it came to hydrological changes outside of their cities. While urban flood defences were evidently often successful

59 Simić 1948: 232–251; Bruce-Chwatt 1980: 46–52, 61–65; Szénási et al. 2003.
60 E.g. Varro *RR* 1.12.2 on diseases coming from swamp air; for full discussion, see Sallares 2002: 55–89.
61 Sallares 2002: 2–3.
62 On a link between seasonal peaks of mortality and malaria in the Roman world, see Scheidel 1994.
63 Frier 1983.

in defending the cities from damage, the same water surge would certainly flood both the immediate hinterland and the wider surrounding landscape. For instance, the Kupa at its mouth in *Siscia* oscillates by as much as 10 m. annually, and, together with the Sava, would have regularly flooded an area within a radius of about 10 km.[64] The cities thus might escape damage, but each annual flood would result in worsened living conditions, for humans and domestic animals alike, and in a degree of harvest failure in the countryside at times of unusually large floods.[65] Furthermore, floods would have also affected transport, particularly along the river,[66] which would have had a knock-on effect on trade, supply, and possibly prices, particularly as both the Danube and the Sava were major transport and supply corridors. For the frontier cities floods would also have brought additional insecurity by affecting defence structures, and the same would have been true at times when ice formed on the rivers.[67]

With rivers being such a powerful force in shaping both everyday lives and the fortunes of the regional cities, it is no wonder that the Romans worshipped the rivers, believing they possessed divine powers. *Danubius/Danuvius*, *Savus* and *Dravus* (the Danube, the Sava and the Drava) all received veneration from civic and military officials and common people alike.[68] The rivers were at times venerated alongside pre-Roman deities related to riverine dangers,[69] indicating a preoccupation with the local environment. All of the mentioned rivers were at times merged with official state cults from the mid-second century CE, sometimes by being worshiped alongside Jupiter Optimus Maximus and

64 Durman 1992: 119–120; Lolić 2003: 131.

65 Regular flooding also made the local soils highly fertile and prevented soil exhaustion, though it is unclear to what extent, and if at all, higher yields could have offset the effect of crop destruction due to flooding. High underground water levels and floods would have also limited the scale and output of animal husbandry in the region, by restricting grazing areas available. For the impact of similar riverine environments and flooding on the agricultural production on the Lower Rhine, see Kooistra et al. 2013; 2014.

66 Franconi 2016: esp. 33.

67 On how the fluvial changes of the Rhine impacted its surroundings see Franconi 2017c.

68 Known monuments include dedications to *Danuvius* and *Dravus* from *Poetovio* (*CIL* III, 10263, and perhaps Hoffiller and Saria 1938: no. 266), *Dravus* alone from *Poetovio* (Hoffiller and Saria 1938: no. 267, 268), *Danuvius* from *Mursa* (*CIL* III, 10263), *Aquincum* (*CIL* III, 10395; 3416) and *Vindibona* (*CIL* III, 14359; 27, not explicitly named), *Savus* from *Andautonia* (*AE* 2010, 1239), Litija (*CIL* III, 3896), Hrasnik (*CIL* III, 5134; 5138; 11684), Sevnica (*AE* 1938, 152) and Radeče (*AE* 1934, 71). No securely attributed sculptural representation of the rivers is known. Representations of the Sava and the Kupa are known from coinage of Probus, a native of *Sirmium*, and follow the standard iconography for river personifications (cf. *RIC* 764). On the cult of these rivers see Kojić 1966; Rendić-Miočević 2012. On worship of rivers in the Roman Empire in general see Campbell 2012: 118–159.

69 E.g. *Savus* and *Adsalluta* in Noricum (Šašel Kos 1994).

sometimes by addition of the attribute *Augustus*, with high civic and military officials appearing among the dedicants.[70] As many as three sanctuaries dedicated to Danubius have been proposed in *Aquincum*, all located on river banks and the islands.[71] Popular engagement with the river cults is attested in a form of a lead *defixio* tablet retrieved from the river at *Siscia*, pleading to *Savus* to drown the writer's opponents in a lawsuit so they would not be able to give evidence against him.[72] The presence of traders and shippers, as well as river navy units, probably contributed to the cults' popularity.[73]

5 Impact of the Army

I would like to briefly outline the impact of another factor, this time political and social, on the regional physical development of cities, that of the army. Much has been written about the military garrisons on the Danube,[74] and my aim is not to add to scholarship of this kind. Instead the focus of my discussion will be on how the military factor influenced the physical development of regional cities.

As has already been noted, the location of many of the cities was predicated by the pattern of garrisoning during the early first century CE. *Vindobona*, *Carnuntum*, *Aquincum*, *Brigetio*, *Singidunum* and *Viminacium* all developed alongside legionary camps, while *Mursa*, *Bassianae* and *Margum* sprang up alongside auxiliary ones. Former fort sites were also common locations. *Poetovio* was established at the site of an abandoned legionary camp, while *Mursella*, *Salla*, *Gorsium*, *Municipium Iasorum*, *Cibalae* and *Sirmium* were all home to military bases during the period of conquest or to later auxiliary camps. Sites that show no evidence of earlier military occupation are *Scarbantia* and *Savaria* (an early military presence is suspected at both, given their location, but no traces have been found thus far), as well as *Andautonia*, *Mogetiana* and *Tricciana*, for which little archaeological information is available, making it likely that the number of urban sites with a military past was even greater than can be established

70 E.g. *Dravo Augusto* from *Poetovio* (Hoffiller and Saria 1938: no. 267), *Savo Augusto* from *Andautonia* (*AE* 2010, 1239) and Litija (*CIL* III, 3896). Joint worship of *IOM* and *Danuvius* is also attested in *Raetia* (*CIL* III. 5863; *AE* 2012, 1054). For a provincial governor (*CIL* III, 3486) and *a legatus legionis* (*CIL* III, 10395) erecting an altar to *Danuvius* at *Aquincum* see Alföldy 1961.

71 Zsidi 2011: 243–244.

72 *AE* 1921, 95; Hoffiller and Saria 1938: no. 557; Simón and Rodá de Llanza 2008; Barta 2017.

73 Alföldy 1961: 105. On research on the Danube fleet see Wilkes 2005: n. 52.

74 For an overview of scholarship, see Wilkes 2005: 148–162.

with certainty.[75] As none of the urban sites, except *Municipium Iasorum*,[76] has strong pre-Roman settlement roots, it is clear that decisions on military deployment profoundly structured the urban landscape of the region, a pattern which can also be observed in other provinces.[77]

Regardless of whether cities developed on the sites of former camps or in the shadow of such sites, military installations have moulded the urban layout to the same extent, if not to a greater degree, than the environmental factors discussed earlier. In the case of former fort sites, cities inherited a place that was fashioned for one particular purpose and would have adapted to it, often preserving the shape, main orientation, and communication routes of the preceding camp. Our understanding of this process in the region is limited, with *Gorsium* being the only site which has sufficiently been investigated to provide some insight into the work of the dismantling of the fort and the creation of the civilian settlement on top of its remains, both of which were undertaken by the army.[78] For cities that developed next to forts, military installations dictated their locations and orientations and often even their layouts.

In the conquest period army camps were established according to strategic and logistical needs,[79] providing the first fixed feature at such sites. A commanding position away from the immediate threat of flooding and proximity to drinking water, food, and firewood seem to have been important factors in the choice of locations. The position of the fort would then in turn influence the location of the *canabae*, and the same has been observed for military *vici* of lesser forts. The *canabae* were clearly not a result of an accidental and entirely organic development, with their inner border defined by the defen-

75 Wilkes 2005: 150.

76 At the heart of *Aquae Balissae/Municipium Iasorum* was a pre-Roman *oppidum*, which acted as a tribal centre of the *Iassi* who were granted local autonomy, and significant continuity in the usage of settlement zones, in particular of the hot springs and the related cult area, has been noted (Schejbal 2004: esp. 115). In territories of some other urban sites of the Roman period indigenous settlements have been identified, but these were situated at considerable distances from the Roman towns and never incorporated (e.g. at *Scarbantia*, *Aquincum*, *Poetovio*, *Siscia*, *Mursa*, *Singidunum*). In other cases there is no formal continuity between the indigenous settlement and the Roman town (e.g. at *Cibalae*, where the town was built on the ruins of an Iron Age settlement). There was, however, no segregation between Roman immigrants and indigenous inhabitants. Several cities show the presence of autochthonous material, and some of the inhabitants are likely to have been descendants of the pre-Roman population. For bibliographical references see footnote 10.

77 For examples from Germany, Raetia, Dacia and Britain see Webster 1988; Sommer 1999b; Opreanu 2000.

78 Fitz 2004.

79 Cf. Miller and DeVoto 1994.

sive perimeter of the fort, and the outer by military cemeteries.[80] According to the inscription from Pfaffenberg (*Carnuntum*), the outer edge of the *canabae* was situated at a distance of 1 *leuga* (2.2 km) from the legionary base, measured most likely from the *groma*, a measuring point in front of the *principia*,[81] and the *canabae* of the cities under consideration all seem to follow that pattern. *Canabae/vici* seem to have been laid out by surveyors at the same time that the camps were constructed (with planned military cemeteries at the far end of the *vicus* starting to be used immediately), while evidence from Germany and Noricum seems to suggest that land within the *vicus* was parcelled out at that point as well.[82] Roads leading out of the main gates of the camp further determined the street alignment in the *canabae/vicus*.

Once the fort was established, the survey and the division of the associated land (*limitatio* and *centuriatio*) were done in relation to it, determining the general topography of the surrounding countryside. In *Aquincum*, archaeologists have managed to reconstruct the orientation and set-up of the Roman land survey,[83] with the zero point likely corresponding to the *groma* of the legionary fort, while the *via principalis* and the *via decumana* acted as the main axes of the system. The *insula* system of the *canabae* was aligned to this grid, as was the street network of the civic town, the main axis of which was the north-south road continuing out of the fort's northern gate. The system further projected into the countryside, with villa farms fitting into the grid and military installations along a 30 km section of the Danube upstream and downstream from *Aquincum* also being aligned to it. The fort thus shaped not the just the layout of the *canabae*, but also the civilian town and the wider landscape.

In Pannonia a tripartite system has been observed in relation to legionary forts, consisting of camp, *canabae* (military town), and a civic town at a distance of one *leuga* (2.2 km). *Vindobona*, *Carnuntum* (Fig. 13.3), *Brigetio* and *Aquincum* all conform to this pattern, while the two Upper Moesian legionary centres at *Singidunum* and *Viminacium* on the Middle Danube have only one identifiable extra-mural civilian settlement each, their locations corresponding to that of the *canabae*. When city status was given to legionary towns in Pannonia, it invariably was the civic settlement that received it, not the *canabae*.[84] This was not an uncommon pattern in the Roman world, but there are exam-

80 Sommer 1989.

81 *AE* 1991, 1309–1314; the reading is that of Piso 1991.

82 Sommer 1999a; Groh, Adam and Brandt 2001.

83 Zsidi 2004a; Zsidi 2011: 252–256.

84 See Kovács 2001.

ples of different practices as well.[85] *Singidunum* and *Viminacium* present a bit of a puzzle. As in both cases the *canabae* seem to have been the only civilian settlements outside the military camp, it would follow that it was the *canabae* that received urban status, but this seems to be contradicted by a Severan inscription from *Viminacium* confirming the continued existence of *canabae* at the site after the grant of municipal status had been made (*IMS* II 55).[86]

Although the primary focus of this paper is on the autonomous towns of the Pannonian Basin, the epigraphic and archaeological evidence relating to the *canabae* strongly suggests that these settlements displayed many 'urban' features, thus challenging us to reconsider what the concept of 'city' meant in the Roman world.[87] The *canabae* possessed a quasi-municipal administration with an *ordo* and magistrates.[88] The administrative and jurisdictional remit of these magistrates remains unclear. There is no reason why such magistrates should not have handled the administration of civic matters on the *prata legionis*, but their powers must have been restricted by those of the military commander of the unit on whose territory the *canabae* were located, if only because *canabae* dwellers are unlikely to have owned the land on which they lived.[89] It might be speculated that such restrictions were among the factors which prompted some people to settle beyond the *leuga*, thereby giving rise to civilian towns. Such a move would have released them from the camp's jurisdiction while still allowing them to enjoy all the benefits of living in close proximity to a military base.[90]

Because the *canabae* were not self-governing towns, they are rarely considered in discussions of 'urban' development in the frontier provinces.[91] It seems worth pointing out, however, that at least some *canabae* in the frontier provinces of the empire covered up to 150 ha (all of the space in the *leuga*

85 E.g. at *Novae* in Moesia Inferior, it was *canabae* that got self-governing status, while at *Apulum* both settlements were elevated, the civilian *vicus* becoming a *municipium* and the *canabae* a colony, see Hanel 2007.

86 The fate of *canabae* following the bestowal of urban status on a civilian *vicus* is a much-discussed topic, with continuous existence, a change in status (either promotion or demotion) or incorporation into the civilian town being three commonly cited options. If there was a standard scenario or if the future status of *canabae* was decided on a case-by-case basis and if the abolition of constitutional differences between different communities under the Severi effectively ended the existence of *canabae* are all debated points; see François 1992; Kovács 2001.

87 Cf. de Ligt and Bintliff in this volume.

88 See Franzen 2009: 1276 and n. 4; *RIU* 1425 = *AE* 2000, 1217.

89 Mócsy 1967; Mason 1988: 165; Sommer 1989; François 1992; Gassner 1997.

90 Gassner 1997.

91 Even when settlement function rather than status is the chief criterion, cf. Burnham 1990.

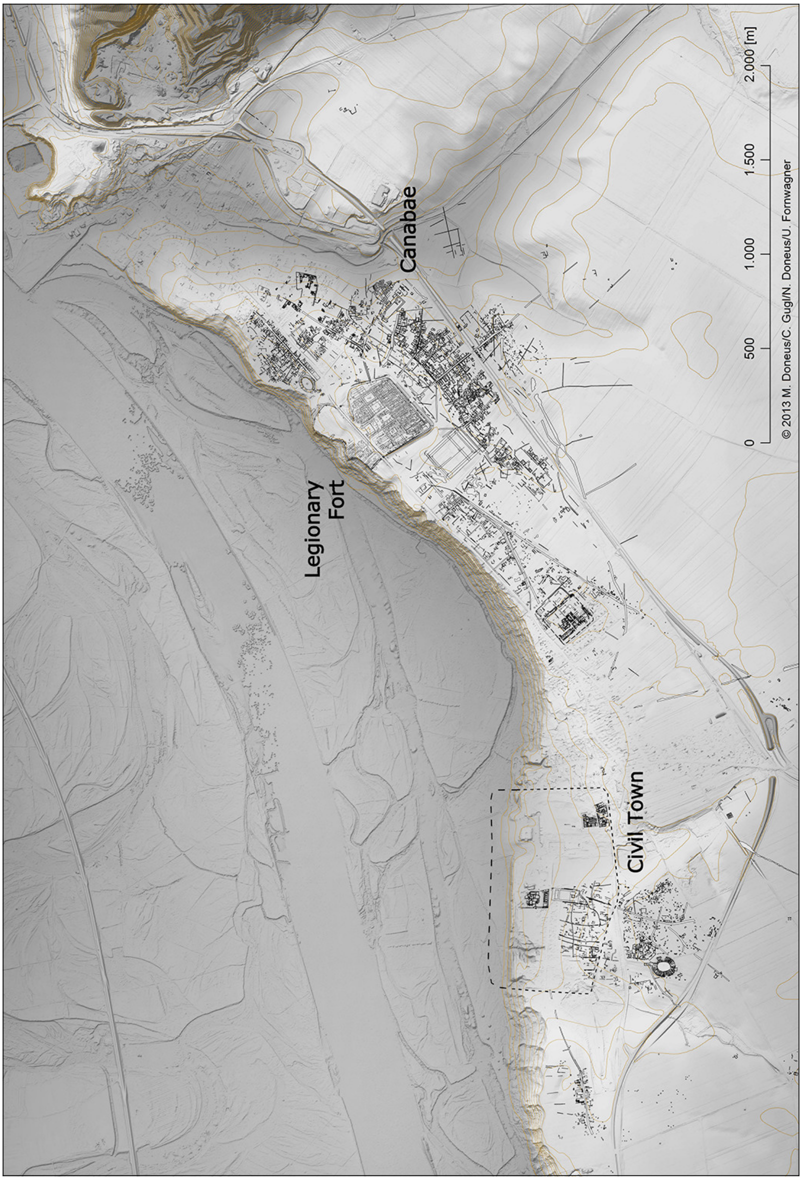

FIGURE 13.3 General plan of Roman *Carnuntum*, showing position of legionary fort, *canabae* and civil town

radius that they were allotted); *canabae* of this size were much larger than the autonomous civilian settlements of Pannonia, few of which occupied areas larger than 40 ha.[92] Many *canabae* were also well equipped with 'urban' types of public architecture, including *forum*-type squares (*Carnuntum* and possibly *Brigetio*), temples (*Brigetio* and *Carnuntum*), amphitheatres (*Aquincum*, *Brigetio*, *Carnuntum* and *Viminacium*), aqueducts (*Aquincum*, *Brigetio* and *Viminacium*), baths (*Carnuntum*) and a harbour (*Aquincum*).[93] The presence of prosperous inhabitants in *canabae* is attested to by the Hercules villa in *Aquincum* and houses decorated with figural paintings in *Brigetio*.[94] The presence of so many 'urban' features in settlements which were not self-governing cities shows the severe limitations of studies of Roman urbanism which are based on a narrowly juridical definition of 'city'.

One feature that the civilian towns of the Pannonian Basin share with the *canabae* of this region is the impact that nearby military camps exercised on their topographies and building techniques. We already saw how the locations and orientations of many civilian towns in the research area were dictated by the camps and the main communication lines emerging from them. In fact, the civic town often starts in a form of a 'roadside settlement' (*Strassensiedlung*) following the main communication route.[95] The typical house-type in the towns of the Pannonian Basin from the mid-second century CE onwards seems to have been the *Streifenhaus* or 'strip-house'. Examples of such houses have been found in *Aquincum*, *Brigetio*, *Vindobona* and *Carnuntum*, as well as further afield in Noricum, Raetia, Gallia, Germania and Britannia,[96] both in *vici/canabae* and in civilian towns. This was the most practical house-type in towns oriented along main roads in terms of efficient usage of space. The houses faced the road with their short sides and typically had an inner division with a shop and a living area in the front and a workshop and a courtyard (including stables and wells) in the back, although there is evidence that in the Pannonian Basin this arrangement was often reversed, with the living area in the back and the workshop in the front. While the origin of this house type is a subject of debate (with a mix of Gallo-Roman traditions and the influence of Roman military

92 Franzen 2009: 1274.
93 Franzen 2009: esp. Fig. 2a.
94 Wellner 1969; Borhy 2011.
95 At *Carnuntum*, *Brigetio*, *Aquincum*, *Scarbantia*, *Mursella*, *Savaria*, *Salla*, *Poetovio* and *Andautonia* the civic settlements clearly developed along the road.
96 Sommer 1988; Rogers Flynt 2005: 147–150; Humer 2008; Müller 2008; Láng 2009; Dobosi and Borhy 2015.

barracks being the most likely scenario), it is clearly not local. Its dissemination through the Pannonian Basin coincided with the arrival of the army.

Technology transfer in terms of building techniques can be even more directly linked to the military. The natural vegetation cover in the Pannonian Basin is woodland, with deforestation probably starting in the Roman period.[97] Timber was therefore abundant, and traditional methods of building have made wide use of it (mainly oak). Sunken and half-sunken houses with earthen floors and a superstructure made of wooden posts and beams, as well as wattle and daub, were the most common types of pre-Roman dwelling in the region.[98] Unworked stone was used in fortification construction from the Iron Age onwards, but its usage remained limited, likely because the region did not possess abundant sources of stone, particularly not good-quality ones.[99] In the first century CE timber construction dominated the architecture of all towns in the Pannonian Basin. Dense forests were clearly still a predominant feature in the wider landscape, and numerous ancient sources refer to them.[100] From the Flavian period onwards, solid architecture spreads more widely. Structures with rubble and mortar walls faced with brick (both fired and mud, with the latter being more common) or clay and wattle now dominate the urban setting.[101] Even today these techniques are still commonly found in villages of the study region. Dressed stone, on the other hand, remained reserved for public buildings. The introduction of new building techniques can in the first instance be clearly associated with military construction. Following this initial stage these techniques spread more widely, appearing first in the forts, then in the *canabae* and finally in the civil towns.[102]

There is plentiful evidence of the military being directly engaged in the actual construction of the civil towns. It is probable that the army was behind the construction of the majority of waterworks, particularly since in some cities

97 Schiller, Miklós and Sass 2010: 40.

98 Knezović 2012; Dobosi and Borhy 2015.

99 The Pannonian Plain consists of mainly alluvial sediments, with sources of building stone occurring primarily along the peripheral mountain ranges (predominantly limestone, and a rare source of marble at Pohorje), though some regional variations and localised sources of stone did exist, e.g. in the vicinity of *Carnuntum* and *Vindobona* (cf. Kronberger et al. 2010).

100 E.g. Plin. *NH* 3.147; App. *Illyr.* 4.18. For an overview of the sources see Parat 2017. Popularity of the cult of Silvanus is another clear attestation to the importance of forests in the region (Dorcey 1992: 71–72; Perinić 2016).

101 Knezović 2012; Dobosi and Borhy 2015.

102 In the case of *Brigetio* civilian town, *canabae*, and legionary fortress all share building techniques: Dobosi and Borhy 2015.

the water supply was at least initially constructed for the use of the garrison. At *Singidunum*, *Aquincum*, *Viminacium* and *Poetovio* military brick stamps confirm the involvement of army units in the construction of water-supply and drainage channels.[103] At *Gorsium* legions *X Gemina* and *II Adiutrix* were involved both in the destruction of a fort and in the construction of the civilian settlement, with their brick stamps having been found in the masonry of several temples, a provincial assembly hall and a provincial altar.[104] *Legio II Adiutrix* also took part in the construction of public buildings in *Mursa*.[105] Construction in brick was, however, often reserved only for a later phase of the civil town's life, with wooden architecture dominating in the initial period. Though military involvement in this phase is more difficult to trace, it was likely as significant, if not more so.

In this paper I have chosen to concentrate on the impact of the army on the physical form of the Roman towns in the Pannonian Basin, but the military element would have had a much wider influence and would have profoundly shaped almost every aspect of the urban experience of these towns. I will offer a very brief consideration of some of other avenues one could pursue, but a full socio-cultural analysis along these lines lies beyond the scope of this paper.

The majority of the cities that form a part of this study may be labelled as 'garrison towns',[106] as the presence of the military directly affected their histories, lay-outs, economies and social-cultural lives. Many others experienced a military presence at some point, e.g. the army returned a number of times to *Poetovio* after the foundation of the city, and after the Marcomannic wars the city was never without a garrison.[107] Furthermore, the density of military installations on the Danube meant that in addition to the army presence on the outskirts of cities, further military units were to be found only a couple of kilometres away in the countryside.[108]

This close physical proximity of civil and military settlements would have put a strain on the relationship between the civilian society and the army. With the cities being autonomous, there must have been some competition for resources between the two, though the monopoly on the use of violence

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103 Póczy 1995; Popović 1997: 9; Korać, Mrdjić and Mikić 2006; Lubšina-Tušek 2008, cf. also Ilakovac 1978; Mladenović 2012: 30.

104 Fitz 1999.

105 Filipović 2004, cf. *CIL* III, 3280.

106 For the concept of a garrison town and examples from other historical periods, see Riis 1993.

107 Horvat et al. 2003: 156–157.

108 E.g. at *Carnuntum*, *Vindobona* and *Aquincum*, auxiliary fortresses were placed just a couple of kilometres from the civil town (cf. Wilkes 2005: 151).

must often have tilted the scale in the army's favour. Knowing that military territories could be quite large (a conservative estimate sets those of *Carnuntum* and *Aquincum* at 500 km^2 each),[109] land under army control would have likely dwarfed the territories of cities located in their immediate vicinity. In certain cases, depending on recruitment pattern, the military and civilian communities living in close proximity would have differed greatly both culturally and ethnically. The prominent presence of veterans in the city councils of many of these cities must have added to the complex dynamic between the two communities.[110] In any case the soldiers did not make for very good neighbours. We hear of violence, exploitation, bribery and extortion from almost all parts of the empire during all periods of its existence, with military personnel exploiting their privileged status to use violence for personal gain.[111] Billeting and the army's role as an instrument in enforcing policies and assisting tax collection would not have helped the relationship either. In modern cases of military and civilian populations living in close association, concerns have been raised not only regarding crime, but also about health and morality.[112]

In the cities covered by this study the impacts of military-civilian interaction followed multiple trajectories, not all of them born out of conflict. The presence of amphitheatres and the popularity of games in the region is certainly a cultural feature that spread from the military to the civilian sector of the society.[113] The popularity of the cult of Mithras, with confirmed worshipers and Mithraea in the majority of towns (*Scarbantia*, *Poetovio*, *Siscia*, *Cibalae*, *Carnuntum*, etc.) and that of Jupiter Dolichenus (*Carnuntum*, *Brigetio*, *Savaria*, *Gorsium*, *Siscia*, *Mursa*, *Bassianae*) also transcends the military/civil town divide, though it seems that the social networks underpinning their spread were mainly military.[114] Ultimately, the changing fortunes of the cities were intrinsically linked to military and imperial policy: the rise of *limes* cities was due to the impor-

109 Mócsy 1974: 141–147, which is less than the projected territories of some other legionary forts (Mason 1988: esp. 167–168).

110 Mrozewicz 1989.

111 MacMullen 1963: 84–89; Campbell 1984: 243–254; James 2011: 163–166; further on complexities of civilian-military interaction: Wheeler 1996; Pollard 2000: 85–167.

112 E.g., the Contagious Diseases Act passed by the UK Parliament in 1864 singles out garrison towns as high-risk environments, mainly due to the high prevalence of prostitution and the related spread of syphilis.

113 E.g., *Aquincum*, *Carnuntum* and *Brigetio* had two amphitheatres each to serve the military and civil town, while a single structure is recorded in *Scarbantia*, *Gorsium*, *Mursa* and *Viminacium*. For amphitheatres and evidence of games in the Danubian provinces, see Bouley 2001: esp. 131–187; Hošek 2003.

114 Collar 2011.

tance of the frontier and to large-scale imperial expenditure on manpower, military infrastructure and logistics. The existence of this connection is confirmed by the impact of the new defensive policies of the late third and early fourth centuries. When the administrative centres were moved away from the frontier zone, various cities of the interior districts, such as *Sopianae*, *Savaria* and *Sirmium*, rose at the expense of the *limes* towns.

6 Concluding Observations

In this paper only two factors that influenced the physical development of cities in the Pannonian Basin have been examined: their natural setting and the role of the military in their foundation and physical development. Even the manifold impacts of these two factors could not be fully explored, and many more factors which are likely to have shaped urban forms and patterns will have to be studied before we can even begin to delineate an overall picture of region-specific types of Roman urbanism in the study area. Nonetheless the regional scope which has been adopted in this contribution exposes more clearly not only the root cause of various phenomena which can be observed on a regional scale but also their importance.

Some of the developmental trajectories which have been identified for the cities of the Pannonian Basin are similar to those of cities in other provinces that had to deal with similar natural factors and where the establishment of temporary or permanent military camps exercised a profound influence on various types of urban communities. However, while striking analogies between regional trajectories appear if we focus on a single factor, more or less unique regional patterns already begin to appear when two factors are taken into consideration. In that sense an approach inspired by Critical Regionalism allows for layers of understanding to be added even to regional groups of cities which are fairly well-known individually, particularly if such an approach is used to identify and highlight the realities and agencies that shaped their development and urban experience.

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CHAPTER 14

Urban Networks in Early Roman Macedonia and Aegean Thrace

Michalis Karambinis

1 Introduction

The aim of this study is to reconstruct the overall shape of the urban systems of Roman Macedonia and Thrace, as part of a larger project which seeks to shed new light on city-size distributions in the Roman Empire during the first to third centuries CE.[1] For practical reasons, the geographical scope of my inquiries will be limited to those parts of Macedonia and Thrace situated within the borders of modern Greece.[2]

A detailed explanation of the methodology to be used in this study has been given in an earlier paper focussed on the cities and settlement systems of the Peloponnese, central Greece, Epirus and Thessaly.[3] Therefore I will limit myself here to a few summary remarks.

Like my attempt to trace the evolution of the regional urban systems of southern and central Greece, the present investigation will rely primarily on published archaeological data. Epigraphic and literary sources will not be ignored, but will mostly be used to corroborate or modify inferences drawn from topographical studies or excavations. In addition, numismatic evidence will be used to check whether local coins were minted only by those cities most prominent from an archaeological point of view, or also by small cities where few building activities are known to have taken place during the first centuries of the Roman Empire. It will be immediately evident that man-power and time

1 The larger project is the ERC Advanced Project 'An Empire of 2000 Cities: Urban Networks and Economic Integration in the Roman Empire', directed by Luuk de Ligt and John Bintliff. At this point I would like to express my gratitude to the following for their useful advice: P. Adam-Veleni, M. Akamati, A. Chrysostomou, C. Dadaki, C. Karadima, K. Liampi, S. Pingiatoglou, M. Tasaklaki, B. Tsigarida and K. Tsouris.

2 Most publications dealing with those parts of the Roman province of Macedonia situated outside the borders of modern Greece are written in Slavic languages or in Albanian. In order to facilitate bibliographical processing these areas are being dealt with by another researcher of the ERC Advanced Project.

3 Karambinis 2018.

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limitations did not permit an exhaustive investigation of all types of evidence relating to the cities and settlements of the vast area that had to be covered. Precisely for this reason I have deliberately targeted particular categories of published data and tried to investigate these data sets up to the point where it became possible to formulate some provisional answers to the specific research questions central to the project at hand.

As has already been explained, the chronological focus of this paper is the Roman Imperial period (first-to-third centuries CE). It has to be noted, however, that some attention will be also paid to the transition from the urban configuration of the Late Classical and Early Hellenistic periods to the Roman pattern. The obvious reason for this is that a diachronic perspective must be considered an essential element in identifying and interpreting the profound changes in the regional urban hierarchies of Greece that took place under Roman domination.

I will start by presenting a region-by-region survey of the active cities of Macedonia and Aegean Thrace during Roman Imperial times. My next step will be to discuss the (physical) size of these cities. In the third part of this contribution I will focus on coinage production and on the presence, or absence, of a limited number of key public buildings. Finally, a comprehensive reconstruction of the urban hierarchies will be attempted. Discussions of every site and references to the sources are provided in the Appendix at the end of this article.

2 From the Classical Period to Roman Times: Continuities and Discontinuities

It seems worth noting at the outset that the transition from the urban patterns of Classical-Hellenistic Macedonia and Thrace to the new patterns which emerged in Roman times was characterised by two dynamics which can also be observed in the rest of (mainland) Greece. On the one hand, many small cities survived as self-governing communities. On the other hand, a considerable number of small cities were absorbed by larger neighbours, resulting in a partial thinning out of the old urban system, or in some regions even in a gradual collapse. The former phenomenon may be plausibly interpreted as the legacy of the *polis* system of Classical Greece; the latter tendency can be observed from the fourth century BCE onwards, but there can be no doubt that it continued during the first centuries of Roman rule.

Four major publications or series of publications have been used as starting points for my inquiries into the fates of the Classical-Hellenistic cities of Macedonia and Aegean Thrace down to Roman Imperial times: the *Copenhagen Polis*

TABLE 14.1 The development of the primary and secondary settlements of Macedonia and Aegean Thrace from early Hellenistic to Roman times

Early Hellenistic times	Roman Imperial times	Total
Polis	Polis	44
Polis	Secondary settlement	14
Polis	Abandoned	5
Secondary settlement	Polis	2
Secondary settlement	Secondary settlement	24
Secondary settlement	Abandoned	3
?	Polis	3
?	Secondary settlement	17
Total number of Hellenistic Poleis		63
Total number of Roman imperial Poleis		49
Total number of Hellenistic secondary settlements		29
Total number of Roman imperial secondary settlements		55

Centre Inventory of the Archaic and Classical Poleis of the Greek World,[4] Fanoula Papazoglou's book on the cities of Macedonia in the Roman period,[5] and two series of epigraphic publications which collect the inscriptions of Lower Macedonia and Aegean Thrace.[6]

By combining the evidence from the aforementioned books with the archaeological data published and discussed in other publications, a first quantitative assessment of the historical evolution of the urban systems of Macedonia and Aegean Thrace can be made: while 63 cities are attested in these two regions in the Early Hellenistic period, their number had dropped to 49 in Roman times (Table 14.1).

At the same time the number of known secondary settlements increased from 29 to 55. It must, however, be stressed, that 14 of the 'new' secondary settlements which are known to have existed in the Roman period were former Early Hellenistic cities which had become subordinate communities in Roman times.[7]

4 Hansen and Nielsen 2004, hereafter referred to as *CPCI*.

5 Papazoglou 1988.

6 Gounaropoulou and Hatzopoulos 1998; Gounaropoulou, Paschidis and Hatzopoulos 2015a and 2015b; Loukopoulou et al. 2005.

7 Moreover, in many cases the 'evidence' for secondary settlements of Classical-Hellenistic

The decline in the number of self-governing cities which emerges from my data matches the downward trend observed by Papazoglou in her study of the entire region of Macedonia (including those areas which are now Slavic-speaking or Albanian-speaking): while she qualifies 124 Macedonian agglomerations of the pre-Roman period as *poleis*, her tally for the Imperial period is only 86 self-governing cities.[8]

Impressionistic conclusions which emerge from general tallies of *poleis* or secondary settlements which were active in the Early Hellenistic or Early Imperial periods must be supplemented and refined by taking a closer look at developments in the settlement systems of particular regions. These regional patterns are the focus of the next part of this contribution.

3 Regional Survey

3.1 *Western (Upper) Macedonia*

Throughout Antiquity Upper Macedonia was mainly organised in tribes with very few urban centres.[9] From the regions of Orestis, Eordaia and Elimia (the only parts of Upper Macedonia that will be covered in this study) only *Aiane* is included among the *poleis* of *CPCI*. In addition, Papazoglou suggests that *Argos Orestikon*, *Lyke*, *Elimia* and *Battyna* might have been *poleis* (at least in the sense of self-governing communities) already in pre-Roman times.[10] While for the first three of these communities there are some indications to support this hypothesis, though only if we opt for an optimistic interpretation of the evidence, there is nothing in the archaeological, epigraphic or literary sources to suggest that *Battyna* existed before the Roman period. In Imperial times all the five settlements just mentioned definitely had civic status, with *Argos Orestikon* appearing as the seat of the *Koinon Oreston*.[11] It has to be noted, however, that

times surviving into the Roman period consists of data collected during extensive archaeological surveys, or of casual finds discovered during rescue excavations. In the absence of archaeological clues regarding the exact nature of a particular site which was 'active' during the Roman period, the evidence provided by a grab of sherds or stray finds leaves open the possibility that the archaeological material recovered might reflect the presence of a villa or farm rather than the continued existence of a secondary settlement. In short, there can be no doubt that my collection of data regarding such agglomerations is very defective.

8 Papazoglou 1988: 438–439.

9 Rizakis and Touratsoglou 1985: 13.

10 Papazoglou 1988: 452–453.

11 After the defeat of Perseus, *Orestis* remained an autonomous community outside the fourth district of Macedonia. This autonomous status was probably maintained during Imperial times; see Papazoglou 1988: 236.

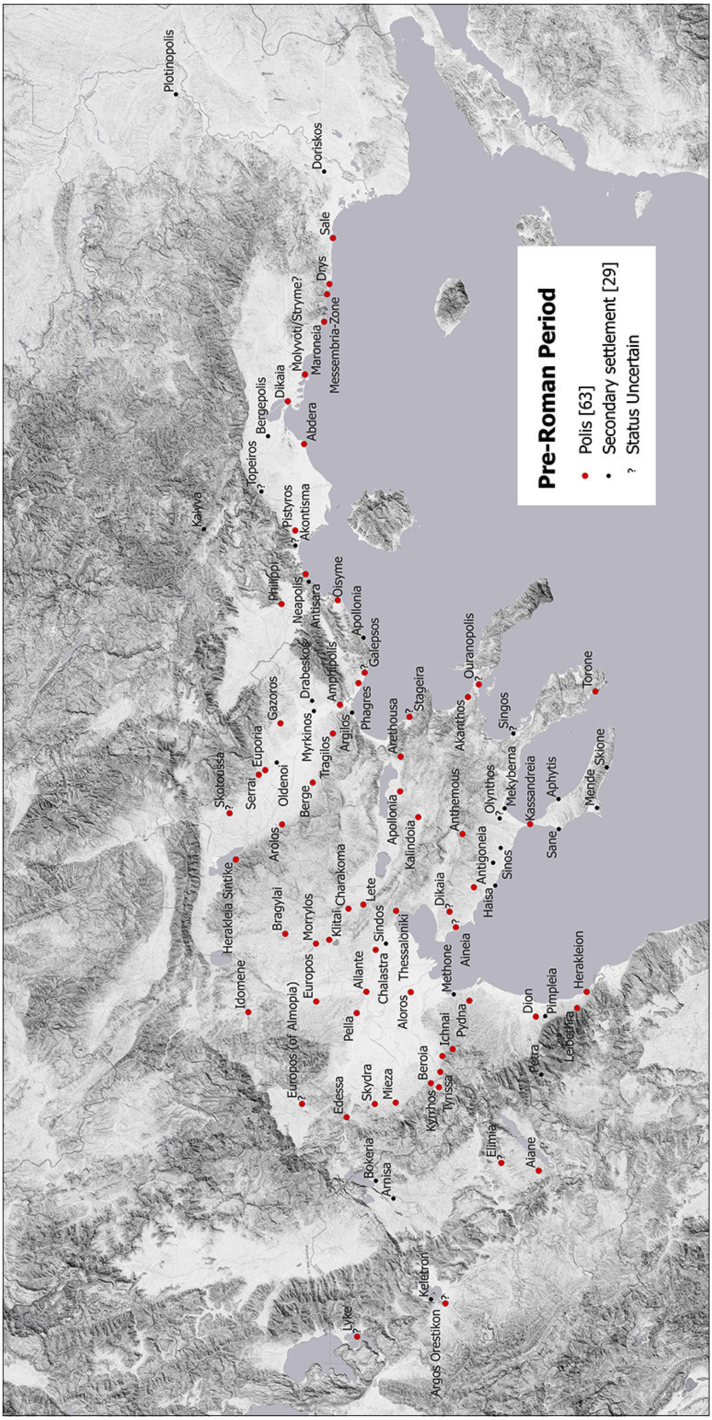

FIGURE 14.1 *Poleis* and secondary settlements in pre-Roman Macedonia and Aegean Thrace

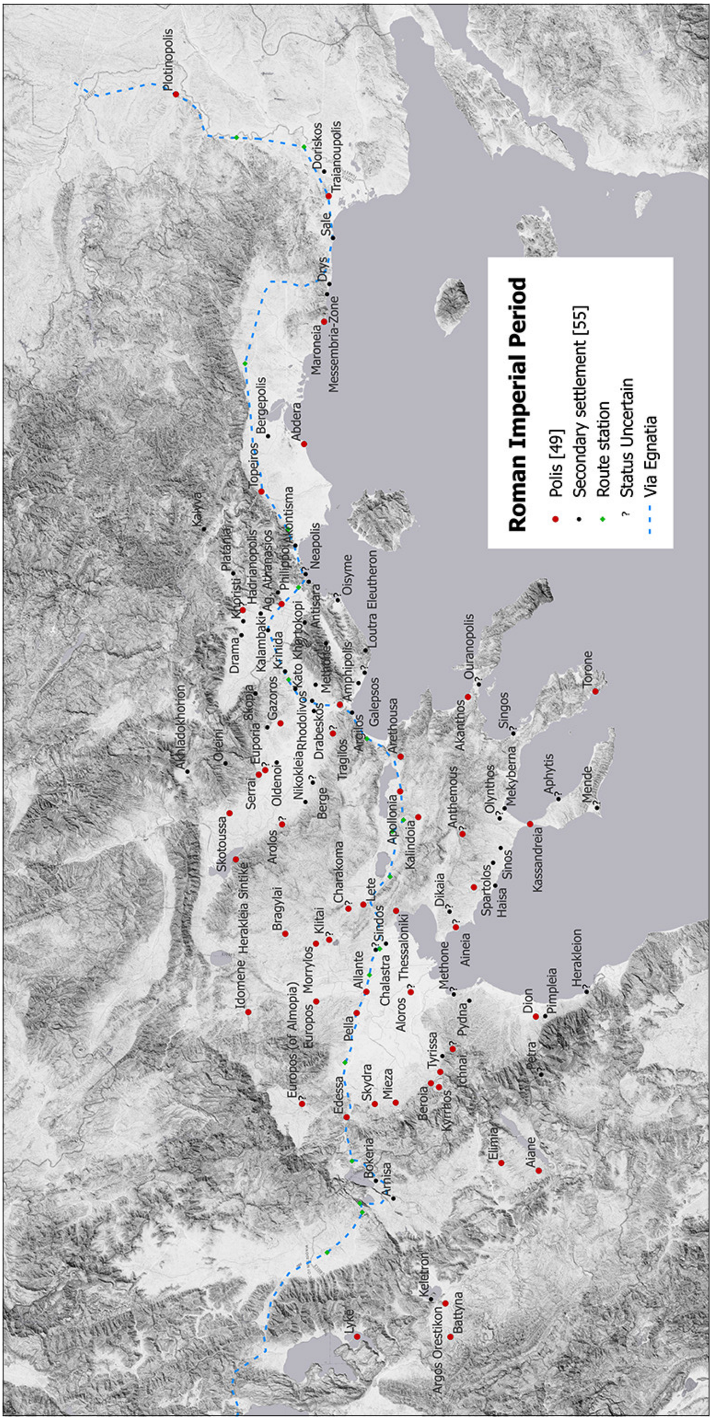

FIGURE 14.2 *Poleis*, secondary settlements and road stations in Roman Macedonia and Aegean Thrace

the existence of these five self-governing communities does not imply that the urban network of Upper Macedonia was significantly strengthened compared to pre-Roman times. It is perhaps not by chance that in the region of *Orestis* the only 'real' urban centre which is attested archaeologically at this moment is the Late Roman town of *Diocletianoupolis*, which succeeded *Argos Orestikon*.

3.2 *Central* (*Lower*) *Macedonia*

The urban pattern of Lower Macedonia changed significantly between the pre-Roman and Roman periods. The two capitals of the Macedonian kingdom decayed after the Roman conquest. *Aigeai* became a simple village, and *Pella* was reduced to a shadow of its former self in the Roman period (cf. below). Although *Pella* became the administrative centre of the third district of Macedonia in the second century BCE and was subsequently re-founded as a Roman colony, involving a displacement of the site of the city to a location to the north-west of the old capital, it never became an important city again.

The decay of the Macedonian capitals was partly offset by the expansion of two other cities which had begun to flourish already in Hellenistic times. One of these cities was *Thessalonike*, which became the seat of the second district of Macedonia in the second century BCE. In 148 BCE the city was given the privileged status of *civitas libera* and became the capital of the new *Provincia Macedonia*. Another city which prospered under Roman rule was *Beroia*, the seat of the *Koinon* of the Macedonians. In the Roman period both *Thessalonike* and *Beroia* almost doubled in size (cf. below). In addition, the city of *Dion* was re-founded as a Roman colony and presented a thriving picture in Imperial times.

Alongside these large and medium-sized cities between 13 and 16 small cities continued to exist in Roman times (*Ichnai*, *Tyrissa*, *Kyrrhos*, *Mieza*, *Skydra*, *Edessa*, *Europos* of *Almopia*, *Idomene*, *Europos*, *Allante*, *Bragylai*, *Morrylos*, *Lete*, and possibly *Aloros*, *Klitai* and *Charakoma*). However, four other small cities (*Leibethra*, *Herakleion*, *Pydna* and *Chalastra*) were either degraded to subordinate status or abandoned in Roman times, with the first three probably being absorbed by the Roman colony of *Dion*.[12]

12 *Chalastra*, although referred to as among the *polismata* contributing to the synoecism of *Thessalonike*, appears as an autonomous community even after the foundation of the large city, definitely losing its civic status only during the Roman period; see Papazoglou 1988: 190, 199–200, 205.

3.3 *Chalkidike and Southern Mygdonia*

In Chalkidike and southern Mygdonia the urban pattern which can be reconstructed for the Roman period does not seem very different from that which had existed in Hellenistic times. *Kassandreia*, yet another Macedonian city which was reinvigorated by the establishment of a Roman colony, continued to be the most important city of the peninsula. The majority of the other Hellenistic cities of this area remained active in Roman times, with the exception of *Stageira*, *Dikaia* and the short-lived town of *Ouranopolis*. In this context it should be noted that the civic status of these three cities is doubted even for the Hellenistic period.

In fact, far-reaching changes in the urban pattern of *Chalkidike* had taken place immediately *before* the Hellenistic period, as a result of the conquest of the area by the Macedonians and the dissolution of previous patterns of political organisation.[13] The most famous episode in this process was the destruction of *Olynthos*, the capital of the Chalkidians, by Philip II in 348 BCE, but a close inspection of the evidence reveals that this is only one element in a far-reaching process of territorial realignment.[14] In fact of the 42 *poleis* which had existed in this area in Archaic and Classical times, only 11 are either known or suspected to have maintained their civic status in Hellenistic times and one more was added in Hellenistic times (*Antigoneia*). Nine of these 12 self-governing communities (apart from the three mentioned above) continued in Roman times.[15] The con-

13 See briefly on this matter in *CPCI*: 811–813.

14 In the fourth century *Olynthos* was a large city of c. 53 ha (my estimate based on Cahill 2002: Fig. 16); Adam-Veleni (2010: 182; 2008: 12) suggests 80 ha.

15 *Poleis* operative only in Classical times: *Aige* (*CPCI* no. 556; Papazoglou 1988: 427; Samsaris 1987: 384–385), *Aioleion* (*CPCI* no. 558), *Akrothooi* (Papazoglou 1988: 431), *Aphytis* (*CPCI* no. 563; Papazoglou 1988: 427–428; Samsaris 1987: 386), *Assera* (*CPCI* no. 564; Papazoglou 1988: 433), *Dion* (*CPCI* no. 569; Papazoglou 1988: 431), *Galepsos* (*CPCI* no. 569; Papazoglou 1988: 431), *Gigonos* (*CPCI* no. 572), *Haisa* (*CPCI* no. 573), *Kithas* (*CPCI* no. 579), *Kleonai* (*CPCI* no. 580; Papazoglou 1988: 431), *Makyberna* (*CPCI* no. 583; Mylonas 1943; Papazoglou 1988: 427), *Mende* (*CPCI* no. 584; Papazoglou 1988: 428–429; Samsaris 1987: 363–364, 382), *Neapolis* (*CPCI* no. 586; Papazoglou 1988: 427), *Olophyxos* (*CPCI* no. 587; Papazoglou 1988: 431), *Olynthos* (*CPCI* no. 588; Papazoglou 1988: 426–427; Hatzopoulos 1988: 64–65; Samsaris 1987: 373–374), *Piloros* (*CPCI* no. 593), *Pleume* (*CPCI* no. 595), *Sane* (*CPCI* no. 601; Papazoglou 1988: 427–428; Samsaris 1987: 381), *Sarte* (*CPCI* no. 602), *Sermylia* (*CPCI* no. 604; Samsaris 1987: 376–377), *Singos* (*CPCI* no. 605; Papazoglou 1988: 430–431), *Sinos* (*CPCI* no. 606; Samsaris 1987: 370–371); *Skabala* (*CPCI* no. 607), *Skione* (*CPCI* no. 609; Papazoglou 1988: 427–428; Samsaris 1987: 382), *Spartolos* (*CPCI* no. 612; Samsaris 1987: 369–370), *Stolos* (*CPCI* no. 614; Papazoglou 1988: 431), *Strepsa* (*CPCI* no. 615; Hatzopoulos 1987), *Therambos* (*CPCI* no. 616; Papazoglou 1988: 427; Samsaris 1987: 383–384), *Thyssos* (*CPCI* no. 618; Papazoglou 1988: 431), *Tinde* (*CPCI* no. 619). *Poleis* operative

clusion must be that the urban system of Chalkidike and southern Mygdonia had already been severely thinned out in the third quarter of the fourth century BCE and that the urban pattern of Roman times continued the simplified pattern created in this period.

3.4 *Eastern Macedonia*

In eastern Macedonia a significant reconfiguration of the urban pattern took place as a result of the foundation of the colony of *Philippi*. When this colony was established, the areas formerly controlled by a number of (apparently small) coastal cities were incorporated into its territory, with the old towns either being degraded (*Phagres*, *Galepsos*, *Oisyme* and *Neapolis*) or completely abandoned (*Pistyros*). The same happened to the inland town of *Berge*, whose territory was also attributed to *Philippi*, despite the fact that it was situated at a distance of no less than 60 km from the new colony.[16] In Roman times the town of Hadrianopolis was situated to the north of *Philippi*. We have no information on the status of this settlement in pre-Roman times, but in the Roman period it was a subordinate community within the territory of *Philippi*.

The other inland cities of Eastern Macedonia which had existed in Hellenistic times continued to exist in the Roman period. Of these cities *Amphipolis* had been the seat of the first district of Macedonia between 167 BCE and 148 BCE and

from Classical to Hellenistic times: *Aineia*(?) (*CPCI* no. 557; Papazoglou 1988: 205, 418), *Dikaia*(?) (*CPCI* no. 568; Papazoglou 1988: 202, 205), *Ouranopolis*(?) (*CPCI* no. 600 'Sane'; Papazoglou 1988: 431), *Stageira*(?) (*CPCI* no. 613; Sismanidis 2003). Hellenistic *ex-novo* foundations: *Antigoneia* (Papazoglou 1988: 419–421, 462–463). *Poleis* operative from Classical (or Hellenistic) to early Roman times: *Anthemous* (*CPCI* no. 563; Papazoglou 1988: 427–428; Samsaris 1987: 386), *Antigoneia* (from Hellenistic times onwards) (Papazoglou 1988: 419–421, 462–463), *Arethousa* (*CPCI* no. 546; Papazoglou 1988: 222–223; Moschonisioti 1992: 408), *Kalindoia* (*CPCI* no. 575; Adam-Veleni 2008; Papazoglou 1988: 216–218), *Poteidaia/Kassandreia* (*CPCI* no. 598; Samsaris 1987; Papazoglou 1988: 424–426; *TIR* K34: 68), *Torone* (*CPCI* no. 620; Papazoglou 1988: 429–430). *Poleis* operative from Classical to late Roman times: *Akanthos* (*CPCI* no. 558; Papazoglou 1988: 433–434; Trakosopoulou-Salakidou 1996; Honigmann 1939: 640.5), *Apollonia* (*CPCI* no. 545; Adam-Veleni 2000; Papazoglou 1988: 218–222; Hammond 1995; Hatzopoulos 1994; *TIR* K34: 16; Honigmann 1939: 640.3).

16 According to Rizakis, because of the lack of available lands close to *Philippi*, Augustus found supplementary lands to locate more colonists in this location, an area probably containing many formerly royal lands confiscated after 167 BCE and incorporated into the *ager publicus*; see Rizakis 2015: 479. It is unknown whether the territorial increase of *Philippi* resulted in a similar growth for the town itself; little is known of the pre-Roman phase of the city, and for now we assume a pre-Roman city size either similar to that of the Roman colony, that is c. 42 ha, or perhaps somewhat smaller (cf. below).

is attested as a *civitas libera* during the Late Republic and Early Empire. There can be no doubt that this was the most important city of eastern Macedonia after *Philippi*.

3.5 *Aegean Thrace*

The urban system of pre-Roman Aegean Thrace consisted of a series of Greek colonies along the coast. This pattern was clearly determined by the main communication route, that is the sea, and testifies to a strong orientation towards the rest of the Greek world. After the Roman conquest, however, the main axis of communication shifted to the highways of the interior, the most important of which was the *Via Egnatia*. In Classical and Hellenistic times the areas through which these roads passed had been completely devoid of urban centres. The realignment of communication routes which took place in Roman times, triggered the foundation of a number of relatively modest urban centres along the roads, in order to facilitate administration, tax collection and the task of maintaining the highways.[17] These new cities were *Topeiros*, *Traianoupolis*, *Plotinopolis* and (outside the boundaries of the present study) *Hadrianoupolis*. In the coastal districts only the most important of the old *poleis* continued to exist, namely the three *civitates liberae* of *Abdera*, *Maroneia* and (outside the boundaries of the present study) *Ainos*. All of these cities decreased in size during the Roman period (cf. below). As for the rest of the coastal cities, *Dikaia* and Molyvoti/*Stryme* had been abandoned since Late Classical/Early Hellenistic times, and during the Roman Empire *Drys*, Messembria/*Zone* and *Sale* became villages of *Traianoupolis*.

A glance at the territorial boundaries of the cities (as attested by the epigraphic evidence) sheds some additional light on the reasons behind the emergence of this new urban pattern (Fig. 14.3). The most interesting case is *Topeiros*. This city was founded immediately to the north of the territorial boundary of *Abdera*. Since it also had almost no territory to the west, its *chora* extended in a strip of more than 70 km eastwards along the *Egnatia*, as a milestone found at the modern village of *Aetolophos* attests. It seems plausible that the city was founded (and upgraded under Trajan) to provide security and maintenance for the *Via Egnatia*, an obligation which, according to Louiza Loukopoulou, could not be entrusted to the free cities of *Abdera* and *Maroneia*.[18]

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17 Adams 1986; id. 1997; Loukopoulou 1987; Polychronidou-Loukopoulou 1989; Parissaki 2008.

18 Polychronidou-Loukopoulou 1989: 583; Adams 1986: 40.

FIGURE 14.3 Approximate territorial boundaries of the cities of Aegean Thrace in Roman times, as attested by epigraphical evidence

4 The Size of the Cities

Unfortunately, the intensity of archaeological research in Macedonia and Thrace lags somewhat behind that conducted in southern Greece. From the perspective of the present study it is particularly regrettable that few (and mostly ongoing) intensive surveys and geophysical explorations have been carried out, making it more difficult to provide reliable estimates for the size of the built-up areas of cities. In practical terms this means that for northern Greece only uncertain and speculative estimates can be provided, based on pre-Roman city walls, on more or less fragmentary archaeological data and on suggestions made by specialists. On the positive side, it is worth noting that based on the archaeological evidence currently available, size estimates for no fewer than 25 cities can be offered, corresponding to almost half of the active cities of Roman Macedonia and Thrace (Table 14.2). Moreover, these 25 cities appear to have been the most important ones in the geographical area under discussion, in part because archaeological research has tended to focus on major archaeological sites. The majority of those cities whose sizes cannot be estimated with the help of archaeological data must have been of minor importance, as is also suggested by their marginal status in the written sources. Precisely because of this bias in the published archaeological evidence, it is possible to achieve more or less complete, and reasonably reliable, reconstructions of the urban patterns of pre-Roman and Roman Macedonia and Thrace.

TABLE 14.2 Twenty-five cities for which size estimates can be provided

City	Classical-Hellenistic size in (ha)	Roman size in (ha)
Pella	>160	20–40
Aigeai	46–50	1–20 (degraded)
Thessalonike	60	110
Beroia	20–40	40–65
Edessa	20	20
Dion	40	40
Leibethra	1–20	–
Lyke	1–20	1–20
Apollonia	33	20–40?
Arethousa	1–20	1–20
Stageira	7	–
Akanthos	20–40	20–40?
Kassandreia	?	20–30
Torone	1–20	1–20
Amphipolis	60?	30?
Galepsos	1–20	1–20 (degraded)
Philippi	≤42?	42
Abdera	60	20
Maroneia	110	20
Dikaia	7	–
Molyvoti/Stryme?	20–40	–
Messembria/Zone	7	<7 (degraded)
Topeiros	–	1–20
Traianoupolis	–	20
Plotinopolis	1–20 (secondary settlement)	1–20

To judge from the size estimates collected for the purposes of this contribution, there was only one city in pre-Roman Macedonia and Thrace whose size exceeded 160 ha (Fig. 14.4). Of course, this city was *Pella*, the capital of the Macedonian kingdom. In fact, if the size of *Pella*'s built-up area has been correctly estimated as 220 ha, it would have been the second-largest city of Early Hellenistic Greece (after Athens-*Peiraeus*).[19] Interestingly enough, none of the

19 In Classical/Early Hellenistic times, the combined built-up areas of Athens and *Peiraeus* might have been as large as 250–300 ha; see Karambinis 2018: 317–318.

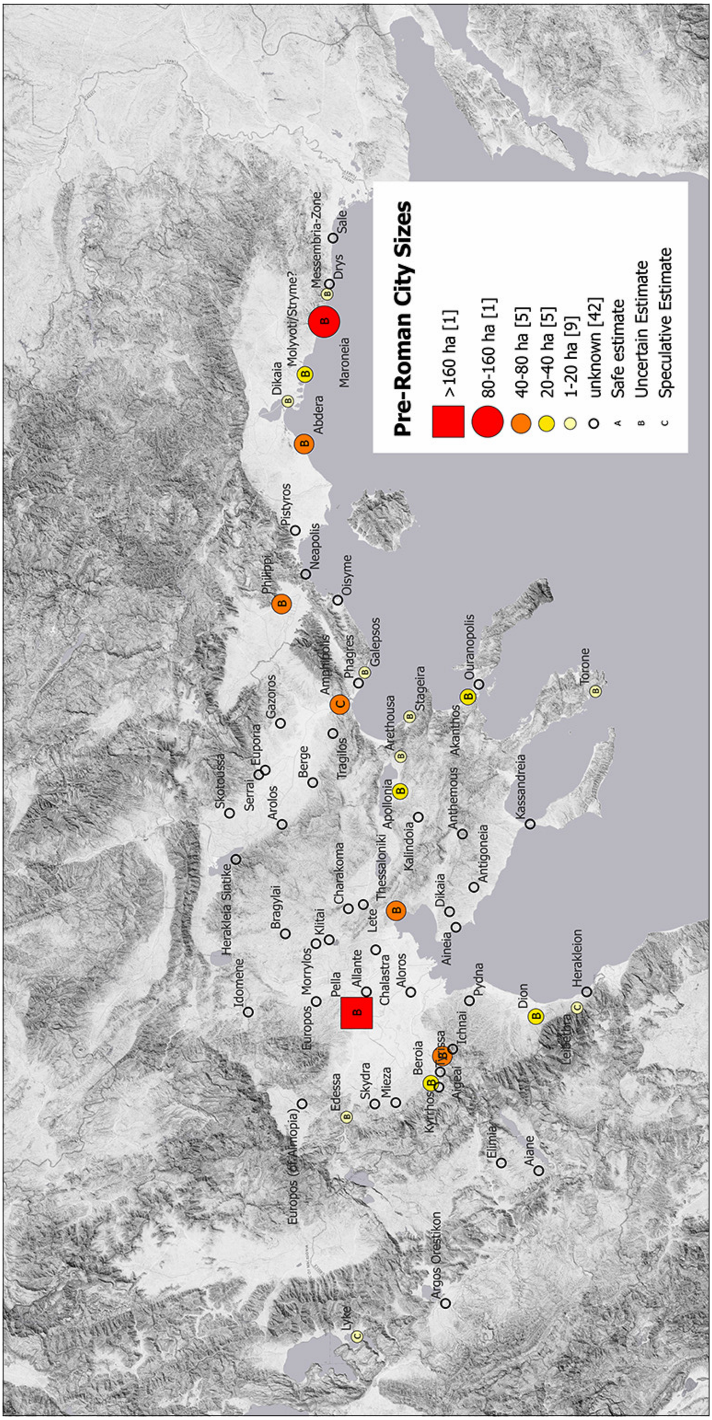

FIGURE 14.4 City sizes in pre-Roman Macedonia and Aegean Thrace

other cities of Lower Macedonia seems to have occupied an area larger than 80 ha in Classical-Hellenistic times.

Some 250 km to the east, in Aegean Thrace, we find the second-largest city of our research area, *Maroneia*, which happens to be the only city in our research area belonging to the 80–160 ha bracket. The (admittedly uncertain) evidence regarding *Maroneia* suggests an estimate of 424 ha for the walled area of this city and a much lower (but still high) estimate of c. 110 ha for the built-up area.

The large area between *Pella* and *Maroneia* contained five cities which occupied areas of between 40 ha and 80 ha, namely the old capital of *Aigeai*, *Thessalonike*, *Amphipolis*, *Philippi* and *Abdera*. These cities were located at more or less regular intervals of between 40 and 80 km.

Descending to the fourth tier of the urban hierarchy we encounter five cities with built-up areas ranging from 20 ha to 40 ha. These cities are *Dion*, *Beroia*, *Apollonia*, *Akanthos* and Molyvoti/*Stryme*. To this group we should perhaps add *Kassandreia*. According to Adam-Veleni,[20] the city wall of the late fourth century BCE enclosed an area of no less than 400 ha, testifying to its founder's ambition to found an exceptional city. While everything suggests that *Kassandreia* never became a large city,[21] it cannot have been completely unimportant.

The vast majority of the remaining 45 cities of Macedonia and Aegean Thrace must have belonged to the 1–20 ha bracket, as is demonstrated by a few cities for which some evidence is available. *Edessa*, for instance, appears to have been more important than many other Macedonian cities. Yet its pre-Roman size did not exceed 20 ha.

In Roman times the urban pattern of the Classical and Hellenistic periods collapsed (Fig. 14.5). With the exception of *Thessalonike* and *Beroia*, which became about twice as large in Roman times, all the other (surviving) cities either shrank, or at best, maintained the sizes which had been attained in the pre-Roman period. *Pella*, which had been a massive city of c. 200–250 ha in Early Hellenistic times, shrank to at most 40 ha in the Roman period. The old capital of *Aigeai*, which had occupied an area of c. 50 ha in the Classical and Early Hellenistic periods, was reduced to a small village in the Roman period. The rest of the cities maintained more or less the same size. Still, the loss of approximately 200–240 ha of built-up space which can be observed at *Pella* and *Aigeai* was not fully compensated for by the expansion of Roman-period *Thessalonike* and *Beroia*, which might have gained c. 50 ha and c. 20–40 ha of built-up space respectively.

20 Adam-Veleni 2010: 178.
21 Adam-Veleni 2011: 548.

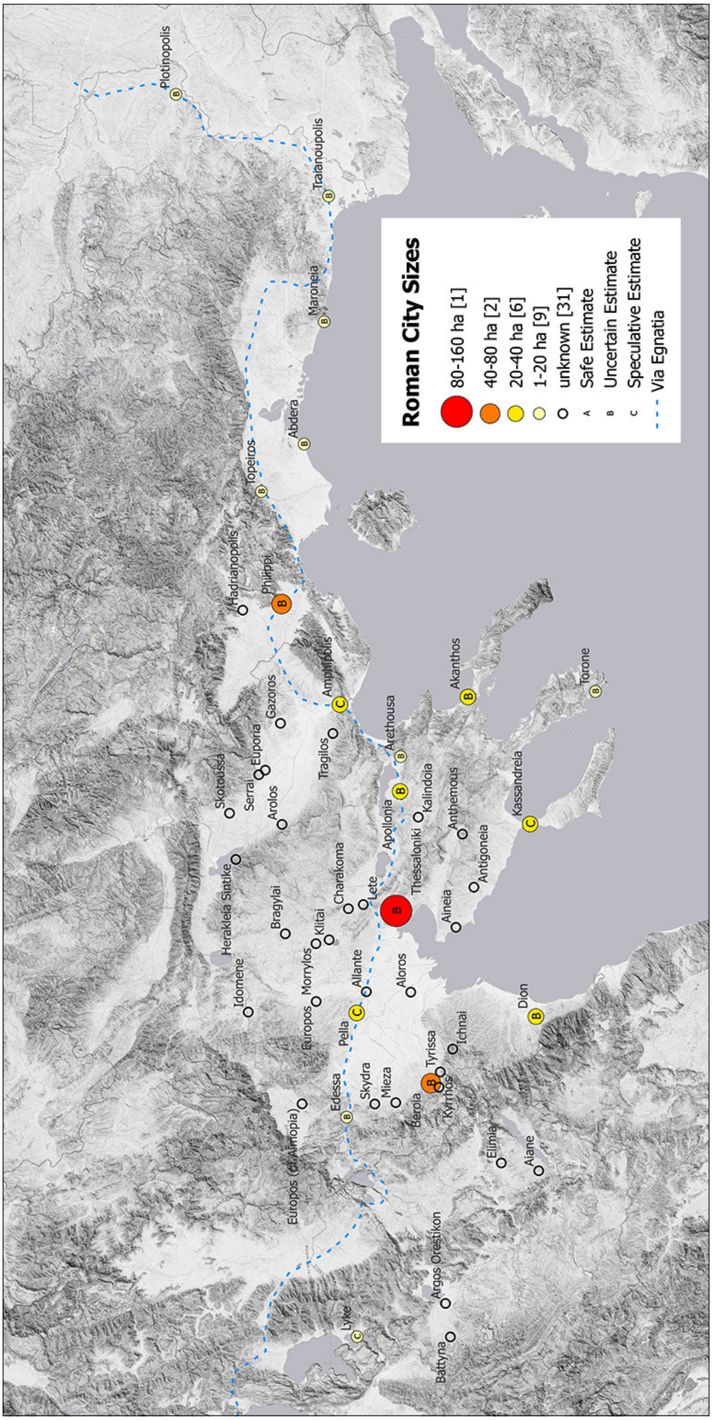

FIGURE 14.5 City sizes in Roman-imperial Macedonia and Aegean Thrace

What is also striking is that no increase in size can be observed in the city of *Dion* after the latter had received a Roman colony, despite the fact that the three formerly self-governing *poleis* of *Leibethra*, *Herakleion* and *Pydna* were deprived of their civic status and reduced to subordinate settlements of *Dion*. Similarly, in eastern Macedonia, while six cities were absorbed by *Philippi*, no clear signs of growth are detectable in the Roman colony. As for *Amphipolis*, in early Roman times it was probably smaller than its Classical-Hellenistic predecessor.

More striking was the collapse in Thrace. Here five *poleis* were downgraded or abandoned in Roman times. Yet Roman *Abdera* occupied an area which was three times smaller than that occupied by its predecessor (20 ha against 60 ha), while of the 110 ha of pre-Roman *Maroneia* only c. 20 ha continued to be occupied. As we have seen, these severe reductions were partially offset by the appearance of two modest inland towns of c. 20 ha size each (*Topeiros* and *Traianoupolis*), but the addition of c. 40 ha of built-up urban space resulting from the rise of these towns, did not fully compensate for the loss of up to 130 ha of occupied space in the coastal cities.

The urban hierarchy of Roman Macedonia comprised only one prime city, the provincial capital of *Thessalonike*, which occupied c. 110 ha during the first three centuries CE. In the next size bracket, comprising those cities which occupied between 40 and 80 ha, we find two cities, namely *Beroia*, the seat of the *koinon*, and the colony of *Philippi*, which were separated from *Thessalonike* by distances of between 60 km and 120 km. The third tier of the regional urban hierarchy comprised six cities occupying areas of between 20 ha and 40 ha, namely the three colonial cities of *Dion*, *Pella* and *Kassandreia*, the free city of *Amphipolis*, and possibly also the cities of *Apollonia* and *Akanthos*, if we rely on general size estimates which do not distinguish between the Classical, Hellenistic and Roman periods. Finally there were approximately 38 cities in Roman Macedonia which occupied between 1 ha and 20 ha. The cities belonging to this fourth group were separated by inter-city distances of less than 40 km.

The urban system of Roman Thrace seems to have been completely detached from that of Roman Macedonia and does not display the same hierarchical structure. It consisted of five similarly sized cities, or eight if *Ainos*, *Kypsela* and *Hadrianoupolis* are included, with inter-city distances ranging between c. 20 km and c. 70 km.

TABLE 14.3 Cities in Macedonia and Aegean Thrace where public buildings are known to have been repaired or erected in the Roman period

City	Agora	Theatre	Odeion	Stadion	Aqueduct	Baths
Dion	×	×	×		×	×
Beroia	×		×		×	×
Mieza		×				
Thessalonike	×		×	×		×
Philippi	×	×			×	×
Maroneia	×	×				
Total	5	4	3	1	3	4

5 Public Buildings and Civic Coinages

One of the objectives of the present research project was to establish, firstly, how many of the cities of Roman Macedonia and Thrace either received new public buildings during the first three centuries CE or repaired or modified existing ones, and secondly, how many of these cities struck coins. In the case of the public buildings I limited the scope of my inquiries to six types of building: agoras, theatres, *odeia*, *stadia*, aqueducts and public baths.[22] It is self-evident that this selection does not do full justice to the building activities carried out in some cities. Focusing on the six categories of buildings just mentioned means, for instance, that the Roman modifications of the Hellenistic *gymnasion* of *Amphipolis* and the *Sebasteion* of *Kalindoia* are excluded from the analysis.[23] Despite this weakness, I find it difficult to think of any reason to doubt the overall correctness of the impression which emerges from my investigations.

To judge from my catalogues of public buildings it appears that of the 49 self-governing cities which existed in Roman Macedonia and Thrace only 6 (roughly 12 %) erected or repaired one or several of those public buildings which appear on my checklist (Table 14.3). This is a low score if we consider that the respec-

22 The use of a sample-strategy was dictated by the need to cover a vast area in a relatively short period of time. I followed the same approach in my article on the cities of central and southern Greece (Karambinis 2018).

23 After receiving modifications in Augustan times, the Hellenistic *gymnasion* of *Amphipolis* was destroyed by fire in the first century CE; the *gymnasion* of the Imperial period which supposedly replaced it, is still to be found; see Koukouli-Chrysanthaki 2011a: 433; Lazaridis 1993: 65; for the *Sebasteion* of *Kalindoia* see Adam-Veleni 2008: 83–89.

tive percentages for the cities of central and southern Greece and for Cyprus are 33 %[24] and 66 % respectively.[25] In Macedonia and Thrace public buildings of the six types which have been examined were repaired only in the five most important cities, namely *Thessalonike*, *Beroia*, *Dion*, *Philippi*, *Maroneia*, and in *Mieza*, which was of lesser importance (Fig. 14.6). There is no doubt that this low score is partly due to a lack of archaeological investigation, and we can be certain that future research will bring to light more evidence for public building activities being carried out in the Roman period. It seems reasonable to suppose, for instance, that cities like *Amphipolis*, *Pella*, *Kassandreia* or the Roman foundations of Thrace were equipped with at least some public buildings.

Despite the patchiness of the published archaeological record, however, I still believe that the very low figure for public building activities is symptomatic of the not very flourishing state of the vast majority of the cities of Macedonia and Aegean Thrace in Roman times. In order to put this finding into perspective it must, however, be pointed out that to judge from the incomplete archaeological data currently available, public building in most cities of Thrace and Macedonia already stood at a low level before the Roman conquest. If the theatre of *Mieza*, whose initial phase is considered to be Late Hellenistic, is excluded, only 15 % of all cities in our research area received public buildings or carried out repairs to existing ones (mainly *agoras* and theatres) in the pre-Roman period.

These somewhat impressionistic conclusions can be refined and corroborated by looking at the civic coinages of Macedonia and Thrace (Table 14.4). From the numismatic evidence collected by Head[26] and more recently by the contributors to *CPCI*, it appears that 28 cities in Macedonia and Aegean Thrace struck coins in Classical or Hellenistic times, that is 44 % of all cities.[27] In the Roman period only 13 Macedonian and south-Thracian cities (including

24 Karambinis 2018: fig. 11.

25 From the 12 cities of Roman Cyprus, archaeological research to date has shown plenty of evidence regarding repairs and new erections during the Roman period in eight of them.

26 Head 1911.

27 The 28 cities are: **Macedonia**: *Aiane* (4th c.), *Aigeai* (500–480), *Aineia* (424–350), *Akanthos* (500–350), *Amphipolis* (424 onwards), *Apollonia* (3rd or 2nd c.), *Dikaia* (5th–4th c.), *Galepsos* (4th c.), *Ichnai* (490–480), *Poteidaia* (500–358), *Lete* (530–480), *Mende* (500–358), *Methone* (400–354), *Neapolis* (500–350), *Oisyme* (4th c.), *Olynthos* (432–348), *Ouranopolis* (c. 300), *Phagres* (pre-Roman), *Philippi* (400–354/356–330), *Pydna* (389–379 and 364–358), *Skione* (6th c.–450 and 4th c.), *Stageira* (late 6th c. onwards), *Torone* (500–420 and 4th c.), *Tragilos* (5th–4th c.); **Thrace**: *Abdera* (544–400), *Dikaia* (5th c.), *Maroneia* (500–350), Messembria/*Zone* (4th–3rd c.); to these we could add two more Thracian *poleis* outside the boundaries of the present research: *Ainos* (450–200) and *Kypsela* (4th–3rd c.).

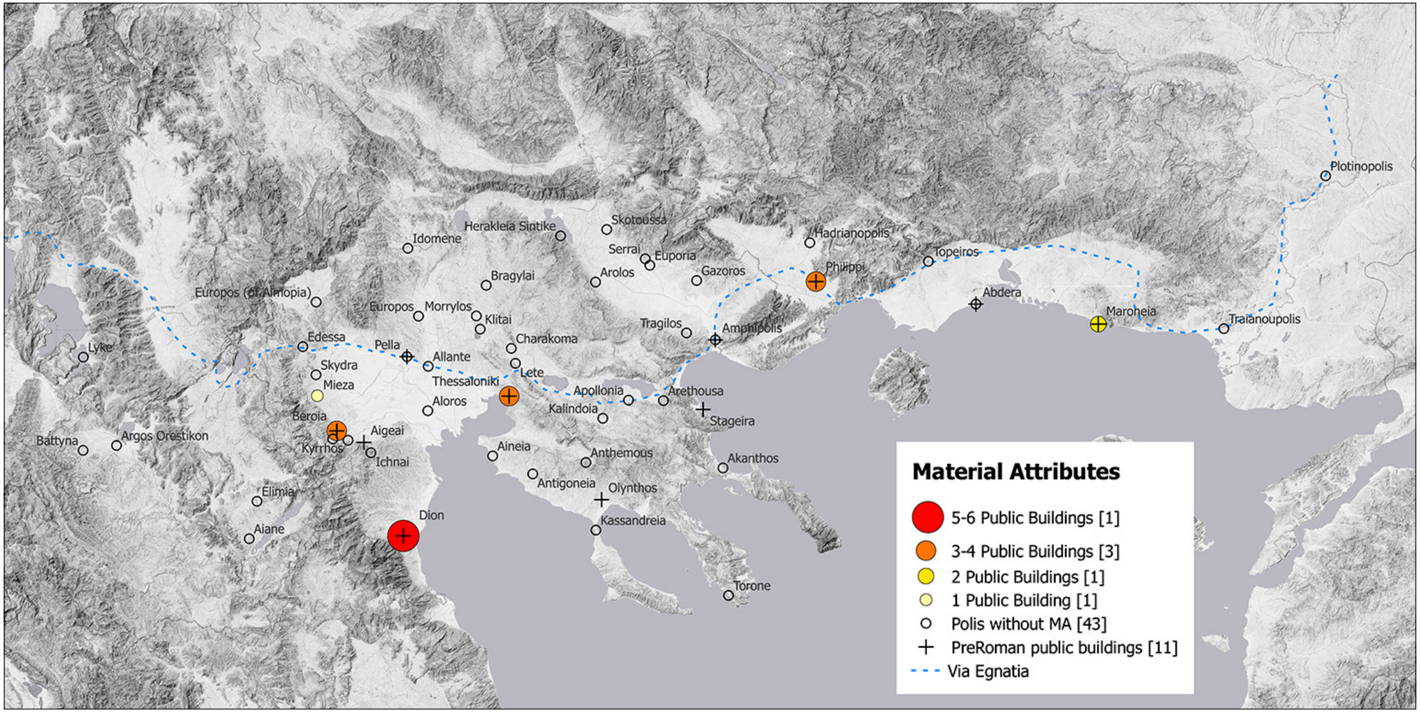

FIGURE 14.6 The six cities of Macedonia and Aegean Thrace with archaeological evidence for existing public buildings repaired/modified or for entirely new buildings being erected during the Roman imperial period, against the *poleis* with evidence for public buildings (*agoras* and theatres) in the pre-Roman period

TABLE 14.4 Cities in Macedonia and Aegean Thrace which minted coins in the Roman period. (* = coins struck for the *koinon* of the Macedonians. During the Julio-Claudians the coins of the *koinon* were probably struck at *Thessalonike*)

City	**Julio-Claudian**	**Flavian**	**Nerva-Antonine**	**Severan**
Dion	×	×	×	×
Pella	×		×	×
Beroia*		×	×	×
Edessa	×		×	×
Thessalonike	×	×	×	×
Kassandreia	×	×	×	×
Amphipolis	×	×	×	
Philippi	×	×	×	
Abdera	×	×	×	
Maroneia	×		×	×
Topeiros			×	×
Traianoupolis			×	×
Plotinopolis			×	×
Total	9	7	13	10

Beroia) struck coins, that is 26% of the total number of cities. This is again a low score compared to central and southern Greece, where 38% of all cities struck coins.[28] In Roman-period Macedonia and Thrace the only cities which minted coins were the provincial capital (*Thessalonike*), the seat of the *koinon* of the Macedonians (*Beroia*), the four colonies (*Dion*, *Kassandreia*, *Pella* and *Philippi*), the free cities (*Amphipolis*, *Abdera* and *Maroneia*), the three Roman foundations in Thrace (*Topeiros*, *Traianoupolis* and *Plotinopolis*), and the city of *Edessa*, which in Roman times presented a relatively thriving picture.

6 Urban Hierarchies

By combining the archaeological evidence relating to city size with the evidence for public buildings and the numismatic data we can reconstruct the urban hierarchies of Roman Macedonia and Aegean Thrace (Table 14.5).

28 Karambinis 2018: fig. 13.

TABLE 14.5 Urban hierarchies in Roman Macedonia and Aegean Thrace (* = low figure due to lack of archaeological data; ** = with the possible exception of Akanthos and Apollonia, each of which might have been slightly larger than 20 ha)

Rank	Size in ha	Public buildings	Coinage in dynasties	Cities and their status
1	110	4	4	Thessalonike (Provincial capital)
2	40–65	4–5	3–4	Beroia (seat of the *koinon*), Dion, Philippi (colonies)
3	20–40	2*	3–4	Pella, Kassandreia (colonies), Amphipolis, Maroneia (free cities)
4	c. 20	– (0–2?)	2–3	Abdera (free city), Edessa (peregrine city?), Topeiros, Traianoupolis, Plotinopolis (Roman foundations)
5	1–20**	– (0–2?)	–	The remaining 36 cities

In this reconstructed hierarchy the provincial capital of *Thessalonike* occupies the highest position, with 110 ha of built-up space, four types of public buildings (of the incomplete set which has been examined in this study), and coins struck in all the four dynasties which interest us here (Julio-Claudian, Flavian, the adoptive emperors and the Severans).

The second rank is held by *Beroia*, the seat of the *koinon* of the Macedonians, and by the colonies of *Dion* and *Philippi*. While the size of the built-up areas of these cities ranges from 40 ha to 65 ha, they erected or repaired four or five types of public buildings and struck coins under three or four dynasties.

To a slightly lower rank we may assign the apparently less successful colonies of *Pella* and (perhaps) *Kassandreia*, as well as the free cities of *Amphipolis* and *Maroneia*. The size of the built-up areas of these cities ranges from 20 ha to 40 ha, they erected or repaired only two types of public buildings (to judge from the example of *Maroneia*), and they struck coins during three or four dynasties. It must be pointed out that this group of cities is archaeologically less well known than those cities which have been assigned to the second tier of the hierarchy, and there is a real possibility that future investigations will reveal that at least some of them have been more active and important than is suggested by the archaeological evidence available at present. All four cities of this group may be expected to have erected or repaired public buildings, and some of them might have received or repaired more than two types of public buildings.

In the lowest tier of the reconstructed urban hierarchy we find the remaining 41 cities with most or all possessing built-up areas ranging from 1 to 20 ha.[29] To judge from the published archaeological evidence the only city of this group where public building activities took place in the Roman period was *Mieza*, where the Late Hellenistic theatre was repaired. There can, however, be little doubt that this extremely low score is due to a lack of archaeological research. If we had better data, we would probably find that most of these cities erected or repaired one or two of the six types of public buildings which have been examined for the purposes of this paper. Among those cities belonging to my lowest tier, five cities are likely to have been more prominent than the other small cities of Macedonia and Aegean Thrace: the city of *Edessa*, the free city of *Abdera* and the three Roman foundations of *Topeiros*, *Traianoupolis* and *Plotinopolis*. These were the only small cities which struck coins during two or three dynasties.

To what extent can the various groups of cities which can be discerned in Roman Macedonia and Thrace be regarded as tiers of a well-integrated hierarchical system? In my view the overwhelming dominance of the small cities points to a low level of economic integration. This impressionistic observation can be confirmed with the help of rank-size analysis, which looks for the interlocking of an urban system into an efficient economic pyramid. If we draw a rank-size graph for those 18 cities for which size estimates are available, the best-fitting graph turns out to be a line with a slope of minus 0.85 (Fig. 14.7). If those cities whose size remains unknown are included in our calculations, on the assumption that almost all of these cities belonged to the 1–20 ha size bracket, the steepness of the slope drops to minus 0.62.[30]

Even without detailed evidence on the inner workings of the urban and rural economies of Roman Macedonia and Thrace, this finding strongly suggests that these parts of the Roman Empire were characterised by a low level of economic integration. An important part of the explanation must be that the essentially 'modular' *polis* system of the Classical and Hellenistic periods, in which the vast majority of cities had been self-sufficient in essential foodstuffs, persisted in

29 Among those cities assigned to my lowest tier only *Akanthos* and *Apollonia* might have occupied areas larger than 20 ha. However, the size estimates for these cities refer to the entire Graeco-Roman era, making it impossible to verify their validity for the Roman period. This uncertainty is exacerbated by a lack of evidence for public buildings or coinage. One possible clue as to the relative importance of these two urban centres is that they were the only cities of southern Mygdonia and Chalkidike which survived in Late Roman times, when even *Kassandreia* had disappeared.

30 For those cities for which no data are available, the average value of the 1–20 ha size-bracket has been used, that is 10 ha.

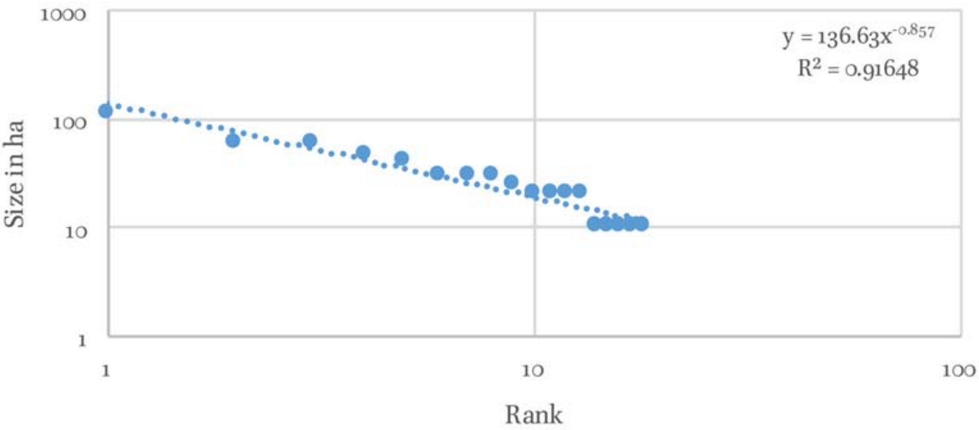

FIGURE 14.7 Log-log rank-size graph for the cities of Roman Macedonia and Aegean Thrace (N = 18)

Roman times.[31] Both during the Classical and Hellenistic periods and in the Roman era very few Greek cities managed to escape from this economic logic. In our research area the most important example is Late Classical and Early Hellenistic *Pella*. Of course, *Pella*'s primacy before the Roman conquest reflects its role as the capital of the Macedonian kingdom, which enabled it to overcome the prevailing economic constraints by obtaining a steady supply of large amounts of imported goods, including basic food items.

After the Roman conquest and *Pella*'s demise, the cities of Macedonia and Thrace continued to be sustained mainly by surpluses produced in their territories. Viewed in this light, it is highly significant that in order to provide the colony of *Philippi* with a solid economic basis, six nearby cities were deprived of their civic status and compelled to hand over their territories. The same probably happened when the colony of *Dion* was founded, and even clearer examples of this phenomenon can be seen in the cases of *Patras* and *Nikopolis* in southern and central Greece.[32]

As I have already explained, some important territorial realignments prompted by this economic logic had taken place before the arrival of the Romans. As far as we know, the establishment of the Roman colony of *Kassandreia* did not entail the disappearance of existing cities. The obvious explanation for this is that a major administrative realignment had already taken place under Kassander, with the degradation of all the Classical *poleis* of the

31 For the concept of 'modular' urban systems cf. de Ligt 2016. For an application to Classical, Hellenistic and Roman Greece see Karambinis 2018.

32 Karambinis 2018; Rizakis 2015.

peninsula of *Pallene* and the handing over of their territories to the new foundation. The same probably happened in the case of the second foundation of Kassander, *Thessalonike*, which entailed the synoecism of numerous small Classical *poleis* of Mygdonia for the benefit of the new city. As for *Pella*, the fact that unlike *Philippi*, *Dion* or earlier *Kassandreia* and *Thessalonike*, this particular colony did not benefit from any large-scale territorial realignments, is actually a strong indicator (alongside the evidence of its small physical size) for the minor importance of *Pella* in comparison to the other three Roman colonies. We can only speculate as to the reason, or reasons, why the Romans did not want a strong colony at *Pella*, but one possibility is that political considerations were decisive. While the old Macedonian capital would be disarmed through the Roman colonists, the Roman authorities may deliberately have decided not to create the conditions that would enable it to regain some of its former splendour by growing into a strong economic, and ultimately sociopolitical hub.

7 Concluding Remarks

The transition from the Hellenistic to the Roman urban pattern in Macedonia and Thrace was not homogeneous, but presented regional variations. In Upper Macedonia, where urban life was almost absent, some attempts were undertaken to 'urbanise' the region, apparently mainly with the aim of facilitating administration and tax collection. Lower Macedonia was characterised by the decay of the old Macedonian capitals of *Aigeai* and *Pella*, whose positions at the top of the urban hierarchy were taken over by *Thessalonike* and *Beroia*, with the important caveat that *Thessalonike* did not rival Late Classical and Early Hellenistic *Pella* in size. In the southern part of the region Octavian founded, or re-founded, the colony of *Dion*, which absorbed a number of adjacent cities. In Chalkidike and southern Mygdonia the urban pattern which existed at the time of the Roman conquest remained more or less intact in the centuries that followed, mainly because a far-reaching reconfiguration of the urban system of these regions had already taken place during the transition from the Classical to the Hellenistic period. Eastern Macedonia received the colony of *Philippi*, which absorbed half a dozen cities. Finally, in Thrace the old Greek *poleis* on the coast disappeared or decayed, while a handful of new cities of modest dimensions appeared inland, reflecting the emergence of new communication routes.

Between the Classical and Early Hellenistic periods and the early first century CE fourteen self-governing cities disappeared in Roman Macedonia and Thrace. Interestingly, most of those cities which survived were smaller in size

than their Classical or Early Hellenistic predecessors. The growth of *Thessalonike* and *Beroia* did not fully compensate for the decay of the old Macedonian capitals. Moreover, despite the absorption of numerous previously independent cities by *Philippi* and *Dion*, no clear signs of city-size growth have been detected in either of the new colonies. These basic facts suggest that the landscapes of Roman Macedonia and Aegean Thrace were less urbanised than they had been in Classical-Hellenistic times. The evidence relating to public buildings and the numismatic data point in the same direction.

Roman Macedonia and Thrace as a whole maintained the modular system inherited from the Classical and Early Hellenistic periods. Rank-size analysis did not reveal the existence of a well-integrated urban system, but rather suggests that the cities continued to be sustained by their territories. This applies even to colonial cities, such as *Philippi* and *Dion*, which were given a solid economic basis by annexing the territories of a number of adjacent towns.

Despite the undeniable existence of important regional divergences, the overall pattern which can be observed in northern Greece is similar to the picture which can be reconstructed for central and southern Greece. In particular it seems legitimate to speak not only of a gradual thinning out of the urban system but also of a long-term decrease in the aggregate areas inhabited by Greek city dwellers.

Appendix: Self-governing Communities in Hellenistic and Roman Macedonia and Aegean Thrace

The following register lists the sources on which this article was based. As indicated in my paper, these sources should on no account be understood as exhausting all possible sources of information relating to the cities and settlements examined in this study. My aim has simply been to collect sufficient data to make it possible formulate provisional answers to the specific questions central to my research. At the beginning of each entry basic references attesting the status of the site in question in pre-Roman and Roman Imperial times are provided. Then follows the evidence for the physical size of the cities. Finally data/sources regarding the material attributes and coinage are listed. Discussions are limited to a few special (and important) cases.

Macedonia

Hellenistic *poleis* Operative or Possibly Operative in Roman Times

Aiane: (*CPCI* no. 528; Papazoglou 1988: 247–249, 452–453; Rizakis and Touratsoglou 1985: 31–33, inscription 15; Siampanopoulos 1974: 60–61, 278–285; *TIR*

K34: 12–13); **Aineia:** (*CPCI* no. 557; Papazoglou 1988: 205, 418, 462–463); **Akanthos:** (*CPCI* no. 559; Papazoglou 1988: 433–434, 464–465); pre-Roman and Roman size c. 20–40 ha (based on the concentration of the finds of the rescue excavation) (see Trakosopoulou-Salakidou 1996); this size not to be confused with the area of the protection zone of the archaeological site, which is much larger than the city itself, c. 56 ha; **Allante:** (*CPCI* no. 531; Papazoglou 1988: 182–183, 448–449; Gounaropoulou, Paschidis and Hatzopoulos 2015b: 739–741, epigraphic evidence [*milliarion*] 582); **Aloros:** (*CPCI* no. 532; Papazoglou 1988: 156–158, 446–447; Gounaropoulou, Paschidis and Hatzopoulos 2015a: 35–41; Apostolou 1998); **Amphipolis:** after the Roman conquest capital of the 1st district of Macedonia, then *civitas libera* (*CPCI* no. 553; Larsen 1938: 449; Papazoglou 1988: 392–397, 460–461; *TIR* K34: 14–15; Lazaridis 1993: 20–21; Koukouli-Chrysanthaki 2011a); pre-Roman walled area c. 250 ha (*CPCI* no. 553); Adam-Veleni (2010: 182; 2008: 12) speculates the size of the (pre-Roman) city might have been c. 60 ha; according to Lazaridis (1993: 55–57), the city in Roman times was restricted to the area surrounding the acropolis, covering an area of c. 30 ha; this estimate has to be viewed with caution, however, because Lazaridis bases this shrinkage on a 'Roman' wall segment, marking, according to him, the west boundary of the city. Given the rarity of early Roman walls in the cities of Greece, we must reckon with the possibility that the 'Roman' wall segment is actually late Roman (as in numerous other cases of Greece), in which case the contraction of the built-up area would have to be attributed to the post-3rd century period. However, it is true that so far no early Roman buildings have been detected far from the acropolis, and the Hellenistic *gymnasion* (south of the acropolis) was destroyed by fire in the 1st c. CE (Koukouli-Chrysanthaki 2011a: 433; Lazaridis 1993: 65); Julio-Claudian, Flavian and Nerva-Antonine coinage (*RPC* I 1626–1645; II 337–342; III 642–658; IV online); **Anthemous:** (*CPCI* no. 562; Hatzopoulos and Loukopoulou 1987: 59 n. 155); **Antigoneia:** (Papazoglou 1988: 419–421, 462–463); **Apollonia:** (*CPCI* no. 545; Papazoglou 1988: 218–222, 450–451; *TIR* K34: 16); pre-Roman walled area c. 33 to 40 ha (Adam-Veleni 2000: 282–284; Adam-Veleni 2008: 12; Adam-Veleni 2010: 182). According to Adam-Veleni (2000: 285–286) the town shrank in the late Roman period, so we can roughly guestimate the built-up area of pre-Roman and Roman town within our 20–40 ha size bracket; **Arethousa:** (*CPCI* no. 546; Papazoglou 1988: 222–223, 450–451); pre-Roman and Roman size c. 20 ha (Moschonisioti 1992: 408); **Argos Orestikon:** in pre-Roman times Upper Macedonia was mainly organised in tribes with very few 'real' urban centres (Rizakis and Touratsoglou 1985: 13); Argos was probably one of the few which acquired a recognisably urban appearance in Roman times; in Roman imperial times seat of the *Koinon Oreston*; in late Roman times re-founded by

Diocletian and renamed Diocletianoupolis (Papazoglou 1988: 236–239, 452–453; Rizakis and Touratsoglou 1985: inscription 188); **Arolos:** (Papazoglou 1988: 362–363, 458–459; Samsaris 1976: 119–120); **Beroia:** prominent *polis* already in the Hellenistic period; the Roman period was an era of great prosperity for the city; *metropolis*, *neokoros* and seat of the *Koinon* of the Macedonians; in the 1st century CE succeeded Aigeai as ritual capital of Macedonia (*CPCI* no. 533; Kanatsoulis 1953–1955: 38–43; Brocas-Deflassieux 1999: 19–20, 78–79; Papazoglou 1988: 141–148, 446–447; *TIR* K34: 25–26; Gounaropoulou and Hatzopoulos 1998: 337–340, and inscriptions 7, 9, 63, 66, 68–71, 102, 106, 108–109, 117; Burrell 2004: 189–197); pre-Roman walled area c. 65 ha including plenty of empty spaces; outside the walls cemeteries; the built-up area of the Hellenistic town should fall within our 20–40 ha bracket, perhaps towards its lower end; in Roman times the city expanded southwards, and it should cover c. 40 ha, or at least not more than 60 ha (Brocas-Deflassieux 1999: 35–43, 50, 99–102, figs. 17, 44–45; Petkos 1997: 265 pl. 1; Gounaropoulou and Hatzopoulos 1998: 45–46); Roman interventions in the *agora*, Roman *odeion*, aqueduct and public baths (Brocas-Deflassieux 1999: 62–63, 91–92, 94–95; Gounaropoulou and Hatzopoulos 1998: 45–46, 48 and inscription 40); Beroia minted coins for the *Koinon* of the Macedonians during the Flavian, Nerva-Antonine and Severan dynasties; during the Julio-Claudians (until Vespasian) the coins of the *Koinon* were probably struck in Thessaloniki (*RPC* II 335–336; III 631–635; IV online; Burrell 2004: 189–197; Liampi 2005); for the discussion regarding the place of minting (*RPC* I: 303–304; III: 79–80); Beroia struck municipal coins after 242 CE (Head 1911: 242–243); **Bragylai:** (Papazoglou 1988: 184; *TIR* K34: 29); **Charakoma:** probably maintained its civic status in Roman times; archaeological confirmation for activity in Roman period (Papazoglou 1988: 215–216, 450–451; Hatzopoulos and Loukopoulou 1989: 93–95; *TIR* K34: 61; Keramaris 2009); **Dion:** Augustan colony with *Ius Italicum* (Larsen 1938: 448; Papazoglou 1988: 109–110, 444–445; *TIR* K34: 43); pre-Roman walled area 43 ha, habitation zone for both the Hellenistic and Roman town within the walls (*CPCI* no. 534; Stefanidou-Tiveriou 2000: 51; Stefanidou-Tiveriou 1990: 195; Stefanidou-Tiveriou 1998; Pandermalis 1997: 6–7, 14–15, 40–41; S. Pingiatoglou pers. comm.); Roman interventions in the *agora*, Roman theatre, *odeion*, aqueduct and public baths (Pandermalis 1997: 30, 33–39, 49; Pandermalis 1999: 76, 139–152; Lolos 1997: 303; Karadedos 1990); Julio-Claudian, Flavian, Nerva-Antonine and Severan coinage (*RPC* I 1504–1510; II 313; III 609–615; IV online; Kremydi-Sisilianou 1996); **Edessa:** (*CPCI* no. 535; Papazoglou 1988: 127–131, 448–449; Gounaropoulou, Paschidis and Hatzopoulos 2015a: 245–260 and inscriptions 180–182); pre-Roman walled area c. 23–27 ha, habitation zone within the walls, c. 20 ha (*CPCI* no. 535; A. Chrysostomou pers. comm.; Chrysostomou 1987: 163–165; Chrysostomou

2008: 57–60; Chrysostomou 2013: 578–579 pl. 1; Gounaropoulou, Paschidis and Hatzopoulos 2015a: 247); Julio-Claudian, Nerva-Antonine and Severan coinage (Papaefthymiou 2002; *RPC* I 1518–1527; III 603–605; IV online); **Elimia:** perhaps *polis* since pre-Roman times (Papazoglou 1988: 249–255, 452–453); **Euporia:** (Papazoglou 1988: 359–361, 458–459; Samsaris 1976: 117–118; *TIR* K34: 53); **Europos:** (*CPCI* no. 536; Papazoglou 1988: 180–181, 448–449; Gounaropoulou, Paschidis and Hatzopoulos 2015b: 765–793); epigraphic evidence for a 4th century-CE aqueduct, not taken into consideration in the present research (*SEG* 38: 608); **Europos (of Almopia):** (Papazoglou 1988: 172–173, 448–449; Gounaropoulou, Paschidis and Hatzopoulos 2015b: 799–801); **Gazoros:** (*CPCI* 856–857; Papazoglou 1988: 382–383, 460–461; *TIR* K34: 55; Samsaris 1976: 129–131); **Herakleia Sintike:** (Papazoglou 1988: 368–371, 460–461); anonymous Roman coinage (*RPC* III 667); **Ichnai:** (*CPCI* no. 538; Papazoglou 1988: 154–156, 446–447; Gounaropoulou, Paschidis and Hatzopoulos 2015b: 749–769); **Idomene:** (Papazoglou 1988: 177–180, 448–449; *TIR* K34: 63–64); **Kalindoia:** (*CPCI* no. 575; Papazoglou 1988: 216–218, 450–451; Adam-Veleni 2008: inscriptions on pp. 98–103, 109–110, 135–136, 164–165); **Kassandreia:** Classical Poteidaia, re-founded by Kassander in 316 BCE; Roman colony with *Ius Italicum* (*CPCI* no. 598; Papazoglou 1988: 424–426, 462–463; Samsaris 1987; *TIR* K34: 68; Larsen 1938: 448); no evidence for the pre-Roman size, apart from the estimate of c. 400 ha for the walled area suggested by Adam-Veleni 2010: 178; Samsaris (1987: 363) guestimates the inhabited area of the colony as c. 20–30 ha; Julio-Claudian, Flavian, Nerva-Antonine and Severan coinage (Head 1911: 213; *RPC* I 1511–1517; II 315–316; III 636–641; IV online); **Klitai:** (Papazoglou 1988: 184–185, 448–449); **Kyrrhos:** (*CPCI* no. 539; Gounaropoulou, Paschidis and Hatzopoulos: 2015b: 517–519 and epigraphic evidence 407, 417; Papazoglou 1988: 152–154, 446–447; Adam-Veleni 1998); **Lete:** (*CPCI* no. 550; Papazoglou 1988: 213–215, 450–451; *TIR* K34: 78); **Lyke:** a secondary tribal community, perhaps *polis* from Hellenistic times, which in Roman times becomes definitely a *πολιτεία*, a *civitas* (Papazoglou 1988: 242, 452–453); Lyke has been identified on the small island of Ayios Achilleios (small Prespa); thus 1–20 ha size guestimate; **Mieza:** (*CPCI* no. 542; Gounaropoulou, Paschidis and Hatzopoulos 2015a: 161–165; Papazoglou 1988: 150–152, 446–447; Rhomiopoulou 1997: 8); Roman interventions in theatre (Poulakakis 2008: 166–168; Sear 2006: 418; Karadedos et al. 1999; Rhomiopoulou 1997: 8–12); **Morrylos:** (Papazoglou 1988: 183–184, 448–449; Hatzopoulos and Loukopoulou 1989: 114, 116); Roman bath but unknown whether public or private (*TIR* K34: 88; *ADelt* 17, 1961–1962, B2: 217); **Pella:** capital of the Macedonians from the 4th century BCE onwards; after the Roman conquest in the 2nd century BCE, capital of the third district of Macedonia; Caesarian colony, then re-founded by Augustus; the only colony of Macedonia

without *ius Italicum*; not very successful colony; in decay in Roman imperial times (*CPCI* no. 543; Akamatis 2011; Gounaropoulou, Paschidis and Hatzopoulos 2015b: 605–609 and epigraphic evidence 432; Papazoglou 1988: 135–139, 446–447; *TIR* K34: 100; Larsen 1938: 448); in the bibliography the size of pre-Roman Pella is usually referred to as c. 400 ha (Lilimpaki-Akamati 2002: 83; Lilimpaki-Akamati and Akamatis 2003: 16; Adam-Veleni 2008: 12); from the context of the publications it is clear, though, that this size is an approximate estimation of the walled area; the south segment of the wall has not yet been revealed (M. Akamati pers. comm.; see also Lilimpaki-Akamati 1992: 129–134); according to my calculations the area occupied by the orthogonal plan of the city of Pella (Lilimpaki-Akamati 2002: 84, Fig. 1; Lilimpaki-Akamati and Akamatis 2003: 19, Fig. 8; Lilimpaki-Akamati 1992: 130, pl. 2) did not exceed 220 ha, of which c. 6.5 ha were covered by the palace and 7 ha by the agora; in fact Chrysostomou (1990: 218) estimates that Pella might have covered c. 250 ha in the late 4th century BCE; similar estimation of c. 400 ha for the walled area and c. 250 ha for the 'real city' by Velenis (1998: 20 and n. 15), and by Vitti (1996: 78); still, a figure of 250 ha would be quite big for the built-up area of the city; if it is correct (and provided that my estimates for the pre-Roman size of the cities of central and southern Greece are correct, see Karambinis 2018), it would render Pella the second-largest city in Greece in the 4th century BCE, after Athens-Peiraeus. The Roman colony was founded 1–2 km westwards of the old city, in a location of a *proasteion* of the Classical-Hellenistic capital; the old city gradually became a vast ruin, with limited human activity mainly in the south side of the city, close to its port (Lilimpaki-Akamati 2006: 609–611). Archaeological investigation at the site of Roman Pella has been very limited, but on any view the Roman colony must have been a shadow of the Classical-Hellenistic capital, not extending in size 40 ha (for a summary of the archaeological evidence of Roman Pella see Chrysostomou 1995 and 2003); according to Papazoglou (1988: 138–139), Roman Pella was a dispersed agglomeration compared to the old large urban centre, and the archaeological evidence currently available seems to confirm this suggestion; Julio-Claudian, Nerva-Antonine and Severan coinage (*RPC* I 1528–1535; III 606–608; IV online; Chrysostomou 2003; Gounaropoulou, Paschidis and Hatzopoulos 2015b: 606); **Philippi:** Roman colony with *ius italicum* (*CPCI* no. 637; *TIR* K35.I: 45–47; Papazoglou 1988: 405–413, 460–461; Larsen 1938: 448–449); pre-Roman walled area 67 ha (Koukouli-Chrysanthaki and Bakirtzis 2003: 18–21, Fig. 14); by excluding the acropolis and its steep slopes (Sève & Weber 2012: 11) we reach c. 42 ha of built-up area for the Roman city; for the pre-Roman town not many things are known; we assume a similar size (Koukouli-Chrysanthaki 2011b: 447); so far no *proasteion* has been detected outside the walls, but only sporadic vil-

las (C. Dadaki pers. comm.); Philippi is the only Roman city of Macedonia for which a large number of dependent settlements is epigraphically attested (Rizakis 2015: 479, Fig. 3; Papazoglou 1988: 411); Roman *forum*, Roman interventions in theatre, Roman aqueduct and public baths (Sève and Weber 2012; Koukouli-Chrysanthaki 2011b: 447–449; Koukouli-Chrysanthaki and Bakirtzis 2003: 23–24, 38–42, 47–48, 56; Lolos 1997: 303; Nielsen 1993: 43 C.355; Gounaris 1990; *TIR* K35.I: 45); Julio-Claudian, Flavian and Nerva-Antonine coinage (*RPC* I: 1646–1655; II: 343–345; III: 659–666); **Serrai:** in Roman times member of the *Koinon* of *Pentapolis* (together with Berge, Gazoros, Hadrianoupolis and Skimbertioi) (*CPCI* no. 639; Papazoglou 1988: 379–381, 460–461; Samsaris 1976: 126–128; *TIR* K34: 115); **Skotoussa:** there is a reference in Pliny (*NH* 4.35) to the *Scotussaei liberi*; this is not confirmed by Papazoglou and for Larsen it remains a mystery; Larsen locates Skotoussa among the free tribes in Macedonia (Papazoglou 1988: 381–382, 460–461; Larsen 1938: 449; Samsaris 1976: 131–132; *TIR* K34: 116); **Skydra:** *polis* from Hellenistic times onwards (*CPCI*: 797; Gounaropoulou, Paschidis and Hatzopoulos 2015a: 215–216; Papazoglou 1988: 149–150, 446–447); **Thessalonike:** founded by Kassander after the synoecism of 26 *polismata*; in early Roman imperial times a *civitas libera* (Adam-Veleni 2003; Allamani-Souri 2003; Vitti 1996: 57–58; Papazoglou 1988: 189–190, 205–212, 450–451; Larsen 1938: 449); the most up-to-date discussion regarding the size of Thessalonike is that by Adam-Veleni: the early Hellenistic walled area was c. 60 ha, with the sanctuaries of the city lying outside the walls; the city was rapidly developed and in late Hellenistic times received the first systematic extension southwards (Adam-Veleni 2011: 549; Adam-Veleni 2010: 178; Adam-Veleni 2003: 123–128); this was also the size of the early Roman city, which has been estimated as c. 100–110 ha (Vitti 1996: 78 and map 6); the maximum city size was reached in late 3rd–early 4th century CE (under Galerius), with a walled area ranging from 260 (Velenis 1998: 20, 55, 61) to 300 ha (Vitti 1996: 77); regarding the size of the Hellenistic city in particular older publications suggested 45–90 ha for the walled area including c. 18 of empty space (Velenis 1998: 31), with Vitti (1996: 77–78) being more optimistic, suggesting a built-up area of c. 100–110 ha, that is the area covered by the orthogonal plan of the Roman city. In any case, it seems safe for the needs of the present paper to locate the size of Hellenistic Thessalonike in our 40–80 ha bracket and that of the Roman city in the 80–160 ha range, tentatively adopting 60 ha and 110 ha as more precise numbers for the two chronological phases respectively; Roman *forum*, *odeion*, *stadion* and public baths (Adam-Veleni 2011: 556–558; Adam-Veleni 2003: 146–150, 155–159; Allamani-Souri 2003: 87; Vitti 1996: 62, 64, 93–104, 151, 179, 183–189, 194–197, 239; Velenis and Adam-Veleni 1989; *TIR* K34: 142–143); Julio-Claudian, Flavian, Nerva-Antonine and Severan coinage (Touratsoglou 1988; *RPC* I 1551–1609;

II 318–330; III: 616–630; IV online); during the Julio-Claudians Thessalonike struck coins also for the *koinon* of the Macedonians; after Vespasian the coins were struck in the seat of the *koinon*, that is Beroia (*RPC* I 1610–1618; 331–334; for discussion for the place of *Koinon* minting see *RPC* I: 303–304; III: 79–80); **Torone:** (*CPCI* no. 620; Papazoglou 1988: 429–430, 464–465; Samsaris 1987: 364); pre-Roman and Roman size 1–20 ha (Cambitoglou and Papadopoulos 1986: 185; Cambitoglou and Papadopoulos 2001: 51–52 and Illustrations: Fig. 2); **Tragilos:** in the 3rd century BCE destroyed, abandoned and moved to a nearby location; for Papazoglou perhaps it maintained its civic status till Roman times; we optimistically adopt her opinion (*CPCI* no. 555; Rizakis 2015: 479, Fig. 3; Papazoglou 1988: 361–362, 458–459; Nikolaidou-Patera 1989: 484; Samsaris 1976: 111–113); **Tyrissa:** Hellenistic *polis*, which clearly maintained its civic status in Roman Imperial times (*CPCI*: 797; Gounaropoulou, Paschidis and Hatzopoulos 2015b: 553–562 and epigraphic evidence 423; Papazoglou 1988: 158–159, 446–447).

Hellenistic *poleis* Certainly or Possibly Degraded or Abandoned in Roman Times

Aigeai: destroyed after the Battle of Pydna and in Imperial times just a small settlement, *kome* of Beroia (*CPCI* no. 529; Gounaropoulou, Paschidis and Hatzopoulos 2015a: 67–68; Kottaridi 2013: 358; Kottaridi 2002: 77; Papazoglou 1988: 131–135, 446–447); pre-Roman walled area c. 80 ha (Kottaridi 2013: 53; Drougou and Saatsoglou-Paliadeli 2004: 11, Fig. 3); Aigeai always remained an agglomeration of loosely connected settlements without a strictly predetermined plan (Kottaridi 2013: 53), according to Adam-Veleni (2010: 175; 2008: 12) these clusters were scattered over an area of c. 70 ha; Drougou (2011: 246, n. 13) gives an up-to-date and more precise size of the late Classical-Hellenistic city, estimated at c. 46–50 ha; **Berge:** Classical-Hellenistic *polis*, degraded to secondary settlement within the territory of Philippi in early Roman period, upgraded to *polis* status in late Roman (*CPCI* no. 628; Rizakis 2015: 479, Fig. 3; Papazoglou 1988: 355–359, 458–459; Samsaris 1976: 114; *TIR* K34: 25); **Chalastra:** (*CPCI* no. 548; Papazoglou 1988: 199–200, 450–451; *TIR* K34: 36); **Dikaia:** among the *polismata* contributing to the synoecism of Thessaloniki in 316 BCE which continued though to exist as autonomous community even after the foundation of the large city; in Roman times probably degraded to a secondary settlement (*CPCI* no. 568; Papazoglou 1988: 205, 450–451); **Galepsos:** Classical *polis* destroyed by Philip II and then re-founded; in Roman times annexed to Philippi (*CPCI* no. 631; Rizakis 2015: 479, Fig. 3; Papazoglou 1988: 398–399, 460–461; *TIR* K34: 55; *TIR* K35.I: 28; Samsaris 1976: 157–159); pre-Roman walled area 1–20 ha (Lazaridis 1971a: Fig. 64); **Herakleion:** in Roman times active but

probably degraded (*CPCI* no. 537; Papazoglou 1988: 115, 444–445); **Leibethra:** abandoned in late 2nd–early 1st century BCE (*CPCI* no. 540; *ADelt* 45, 1995, B2: 498; Poulaki-Pantermali and Klinaki 2007: 161); acropolis 1.5 ha; pre-Roman city-size guestimate 1–20 ha; **Neapolis:** after the creation of the colony of Philippi, Neapolis probably became a *vicus* of Philippi; this is uncertain, however, and while it was certainly a subordinate community within the territory of Philippi, Neapolis might have maintained its civic status; in late Roman times definitely a *polis* (*CPCI* no. 634; Rizakis 2015: 479, Fig. 3; Sève and Weber 2012: 9; Papazoglou 1988: 403–404, 460–461; *TIR* K35.I: 39); **Oisyme:** active in Roman times but probably degraded to a secondary settlement within the territory of Philippi (*CPCI* no. 635; Rizakis 2015: 479, Fig. 3; Koukouli-Chrysanthaki and Papanikolaou 1990: 490; Giouri and Koukouli 1987: 368; Papazoglou 1988: 400–403, 460–461; *TIR* K35.I: 41; Samsaris 1976: 153–156); **Ouranopolis:** Hellenistic *polis* founded by Kassander's brother, Alexarchos; short-lived; no evidence for the Roman period; perhaps active as a secondary settlement (*CPCI* no. 600 'Sane'; Papazoglou 1988: 431, 464–465); **Phagres:** active but degraded in Roman times (*CPCI* no. 636; Nikolaidou-Patera 1996; Papazoglou 1988: 389–390, 460–461; *TIR* K35.I: 44; Samsaris 1976: 160–161); **Pistyros:** active till the 2nd century BCE; in Roman times abandoned; the Roman fort at Nea Kome mentioned by Samsaris (and implied by *TIR*) which according to them 'replaced' the town is dated in the 4th century CE (*CPCI* no. 638; Samsaris 1976: 166–168; *TIR* K35.I: 49; *ADelt* 28, 1973, B2: 451; *ADelt* 27, 1972, B2: 529; Chrysanthaki 1973); **Pydna:** degraded in Roman times as secondary settlement, probably within the territory of the Roman colony of Dion (*CPCI* no. 544; Bessios and Pappa 1996; Papazoglou 1988: 106–108, 444–445); **Stageira:** Classical *polis*, destroyed by Philip II in 348 BCE; then reoccupied (archaeological remains of the Hellenistic period), but civic status uncertain; in Roman Imperial times abandoned (*CPCI* no. 613; Sismanidis 2003).

Sites of Unknown Status in Hellenistic Times, Upgraded to *polis* in Roman Times

Battyna: a tribal community which in Roman times became a *civitas*—at least politically. According to an inscription of 192/3 CE it was a *πολιτεία* of the *koinon Oreston* (Rizakis and Touratsoglou 1985: 168–176, inscr. 186). Papazoglou (1988: 239–241)—*contra* Hammond—does not see a tribal organisation in this, but an organisation of a *civitas*; perhaps not a 'real city' in the urban sense, and for this reason characterised in the inscription as a *πολιτεία*; **Hadrianopolis:** a Classical secondary settlement probably abandoned in the Hellenistic period, which in Roman Imperial times perhaps obtained civic status; but situated within the territory of the colony of Philippi and dependent on that city; member of

the *koinon of Pentapolis* (together with Serrai, Berge, Gazoros and Skimvertioi) (Samsaris 1986: 545–548; Papazoglou 1988: 408–409, 412, 460–461; *TIR* K35.I: 29).

Sites of Unknown Status in Hellenistic Times, Operative as Secondary Settlements in Roman Times

Daphnoudion: (Barrington Atlas; *Pleiades*); **Drama:** (*TIR* K35.I: 25); **Kalambaki:** (*TIR* K35.I: 30; Papazoglou 1988: 412); **Kato Khortokopi:** (*TIR* K35.I: 23); **Khoristi:** (*TIR* K35.I: 22–23; Papazoglou 1988: 411); **Krinida:** (*TIR* K35.I: 34; Samsaris 1976: 182); **Loutra Eleutheron:** (*TIR* K35.I: 35; Samsaris 1976: 191); **Methone** (Eastern Macedonia): (*TIR* K35.I: 38); **Mikro Souli:** (*TIR* K35.I: 38); **Nikokleia:** (Barrington Atlas; *Pleiades*); **Oreini:** (Barrington Atlas; *Pleiades*); **Philippoi:** (*TIR* K35.I: 47); **Platania:** (*TIR* K35.I: 47; Papazoglou 1988: 408–409); **Rhodolivos:** (*TIR* K35.I: 51); **Skopia:** (Barrington Atlas; *Pleiades*).

Hellenistic Secondary Settlements Operative or Possibly Operative in Roman Times

Antisara: (*CPCI*: 856; *TIR* K35.I: 20); **Aphytis:** Classical *polis* degraded in Hellenistic; active secondary settlement in Roman times (*CPCI* no. 563; Papazoglou 1987: 427–428, 464–465; Samsaris 1987: 386; Misaelidou-Despotidou 2003); **Argilos:** Classical *polis*, destroyed by Philip II, from Hellenistic period onwards it continues as a secondary settlement (*CPCI* no. 554; Bonias and Perreault 1993; Papazoglou 1988: 363–364, 458–459; Lazaridis 1972a: 74; *TIR* K34: 17); **Arnisa:** (*CPCI*: 796; Papazoglou 1988: 161–162; *TIR* K34: 18); **Bokeria:** (*CPCI*: 796; Papazoglou 1988: 164–166); **Drabeskos:** (*CPCI*: 856; Papazoglou 1988: 391–392, 460–461; *TIR* K35.I: 25; Samsaris 1976: 141–142); **Haisa:** (*CPCI* no. 573); **Keletron:** (*CPCI*: 796; Papazoglou 1988: 238, 452–453); **Makyberna:** Classical *polis*, in Hellenistic and Roman times *kome* of Kassandreia (*CPCI* no. 583; Papazoglou 1988: 427); **Mende:** Classical *polis*, in Hellenistic and Roman times *kome* of Kassandreia; Roman archaeological evidence not in Mende itself but in the surroundings (*CPCI* no. 584; Papazoglou 1988: 428–429, 464–465; Samsaris 1987: 363–364, 382; B. Tsigarida pers. comm.; Tsigarida and Papadimitriou 2009); **Methone:** (*CPCI* no. 541; Papazoglou 1988: 105–106, 444–445); **Myrkinos:** Classical *polis*; after the foundation of Amphipolis *kome* of the latter (*CPCI* no. 633; Rizakis 2015: 479, Fig. 3; Papazoglou 1988: 390–391, 460–461; *TIR* K35.I: 38; Samsaris 1976: 140–141); **Oldenoi:** (Papazoglou 1988: 384, 460–461; *TIR* K35.I: 40 'Neos Skopos'; Samsaris 1976: 132–134); **Olynthos:** Classical *polis* and capital of the Chalkidians, razed to ground by Philip II in 348 BCE; then re-founded but as *kome* of Kassandreia (*CPCI* no. 588; Papazoglou 1988: 426–427, 462–463; Hatzopoulos 1988: 64–65; Samsaris 1987: 373–374; Cahill 2002: 52 ff.); **Petra:** (*CPCI*:

797; Papazoglou 1988: 116–118, 444–445); **Pimpleia:** (*CPCI*: 797; Papazoglou 1988: 112, 444–445); **Sindos:** (Papazoglou 1988: 201, 450–451); **Singos:** Classical *polis*, from Hellenistic times onwards secondary settlement (*CPCI* no. 605; Papazoglou 1988: 430–431, 464–465); **Sinos:** Classical *polis*, later *kome* of Kassandreia (*CPCI* no. 606; Samsaris 1987: 370–371); **Spartolos:** Classical *polis*, from Hellenistic times onwards *kome* of Kassandreia (*CPCI* no. 612; Samsaris 1987: 369–370).

Hellenistic Secondary Settlements Abandoned in Roman Times

Apollonia: Classical *polis* degraded in Hellenistic period, abandoned in Roman times (*CPCI* no. 627; Papazoglou 1988: 399–400, 460–461); **Sane:** Classical *polis*, later *kome* of Kassandreia; based on Strabo, Papazoglou and Samsaris consider it a *vicus* in Roman times, but archaeology suggests abandonment of the old site, and farm-like activity around it (*CPCI* no. 601; Papazoglou 1988: 427–428, 464–465; Samsaris 1987: 381; Tsigarida and Papadimitriou 2009; B. Tsigarida pers. comm.); **Skione:** Classical *polis*, in Hellenistic *kome* of Kassandreia, in Roman times abandoned (*CPCI* no. 609; Sismanidis 1991: 319; Tsigarida and Papadimitriou 2009; B. Tsigarida pers. comm.; Papazoglou 1988: 427–428, 464–465; Samsaris 1987: 382).

Thrace

Hellenistic *poleis* Operative in Roman Times

Abdera: *civitas libera* in Roman times; the city lost its civic status in late Roman times (*CPCI* no. 640; Loukoupoulou et al. 2005: 157–167 and epigraphic evidence E21–25, E78–79; Chryssanthaki-Nagle 2007: 378–382; *TIR* K35.I: 17; Polychronidou-Loukopoulou 1989: 583); Archaic-Classical city further north; in mid-4th century BCE the city was relocated to the south; 4th-century walled area 112 ha; built-up area c. 60 ha (*CPCI* no. 640; Hoepfner and Schwandner 1986: 199–200, Fig. 194; Chryssanthaki-Nagle 2007: 31 pl. 1; Loukoupoulou et al. 2005: 177; Lazaridis 1971b: 34); in Late Hellenistic and Roman imperial times in decay; after the foundation of Topeiros (under Trajan) part of its *chora* was given to Topeiros; under Hadrian Abdera received its lost territory back; but the town was now only 1/3 of its pre-Roman size, reaching c. 20 (Lazaridis 1971b: 13 and figs. 30–31; Ioakeimidou et al. 2006: 9–10, pl. 1; Loukoupoulou et al. 2005: 165–167; M. Tasaklaki pers. comm.); uncertain Roman bath (Lazaridis 1971b: Fig. 30); Julio-Claudian, Flavian and Nerva-Antonine coinage (Chryssanthaki-Nagle 2007: 327–382; *RPC* I: 1727–1731; II: 355–357; III: 669–678; IV online); **Maroneia:** *civitas libera* and *civitas foederata* in Roman times; the town suffered during the Mithridatic Wars (*CPCI* no. 646; Loukopoulou et al. 2005: 319–338, esp. 325–329, and epigraphic evidence E168, E180 and E185; *TIR* K35.I: 36–37;

Kokkotaki 2003); pre-Roman walled area c. 424 ha (Lazaridis 1972b: 14, 42–44 and Fig. 36; Loukopoulou et al. 2005: 336–337); the inhabited area of the city was in the southern part of the walled area, south of the theatre, covering an area absolutely no more than 160 ha (I counted c. 110 ha) (Psoma, Karadima and Terzopoulou 2008: lvii–lxxii, esp. plan 3; Loukopoulou et al. 2005: 338; C. Karadima pers. comm.; M. Tasaklaki pers. comm.); in Roman imperial times the town was even more shrunken, located in the area of the modern port of Ayios Charalambos and of the Byzantine *Palaiochora*, covering an area of c. 20 ha; apart from some foci of activity (e.g. theatre, acropolis), the rest of the pre-Roman built-up area was abandoned by the 2nd century BCE (C. Karadima pers. comm. M. Tasaklaki pers. comm.); Roman interventions in the theatre and perhaps Roman agora (?) (Sear 2006: 422; Kokkotaki 2003; Karadedos and Karadema 2002); Julio-Claudian, Nerva-Antonine and Severan coinage (Psoma, Karadima and Terzopoulou 2008: 77–78; *RPC* I: 1732–1733; III: 679–681; *RPC* IV online; Schönert-Geiss 1987: 214–220).

New *polis* Foundations

Plotinopolis: founded probably by Trajan at the site of a pre-Roman secondary settlement (Loukopoulou et al. 2005: 570–576 and epigraphic evidence E462–E464; Koutsoumanis 2016); the northern and southern limits of the city are defined by its two main cemeteries (see plan in Loukopoulou et al. 2005: 573); based on this and on the archaeological evidence available at present, the town should be relatively small, perhaps not larger than 20 ha; Nerva-Antonine and Severan coinage (*RPC* IV online; Loukopoulou et al. 2005: 575; Tasaklaki and Koutsoumanis 2012); **Topeiros:** Roman *polis* and road station on *Egnatia*, probably founded at the site of a pre-Roman Thracian secondary settlement; upgraded under Trajan, when it takes the title of *Ulpia*; this upgrading is probably connected with a general development programme of urban centres in Thrace (i.e. Plotinopolis, Traianoupolis) and the efficient control (and maintenance) of the *Via Egnatia*; this is especially clear for Topeiros, whose territory was very restricted westwards, but extended far eastwards, as shown by a milestone found in the modern village of Aetolophos (north of Maroneia), indicating that the inland area south of the Rodopi mountains and along the *Egnatia* was part of the territory of Topeiros; efficient maintenance of *Egnatia* might well have been the reason for its upgrading to *polis* status. According to Loukopoulou, this task could not be entrusted to Abdera and Maroneia because they were *civitates liberae*. To Trajan should be attributed the annexation to Topeiros of lands belonging originally to Abdera, but under Hadrian these lands were given back to Abdera (Loukopoulou et al. 2005: 261–265 and epigraphic evidence E395; Polychronidou-Loukopoulou 1989; *TIR* K35.1:

58); the archaeological evidence suggests a small city, extending over at most 20 ha (Loukopoulou et al. 2005: 266; Koukouli-Chrysanthaki 1987–1990: 81–86 and pl. 1; K. Tsouris pers. comm.); Nerva-Antonine and Severan coinage (Loukopoulou et al. 2005: 263; *RPC* IV online; Head 1911: 288); **Traianoupolis:** probably founded by Trajan on the *Via Egnatia*, perhaps at the site of a pre-Roman secondary settlement; Traianoupolis must be viewed as one element of a general attempt to upgrade Thrace through the foundation of cities in strategical locations for the administration of the *Via Egnatia*, in the absence of established *poleis* along its route (Loukopoulou et al. 2005: 531–534 and epigraphic evidence E433, E437; Adams 1997: 140–144; *TIR* K35.I: 59); Loukoulou et al. (2005: 533) present a map with a hypothetical line of city-walls, enclosing an area 20 ha; most probably these walls are post-3rd-century-CE walls, but judging also from Topeiros and Plotinopolis, the size of the Traianoupolis should not be larger than 20 ha; Adams (1997: 141) sees these foundations as "a kind of synoecism of local villages and clans into a municipal structure that resembled a *polis*", facilitating the political administration, tax collection and provision of services, rather than as a sign of 'real' urbanisation. A size guesstimate of at most 20 ha is also supported by K. Tsouris (pers. comm.); Nerva-Antonine and Severan coinage (Loukopoulou et al. 2005: 532–533).

Hellenistic *poleis* Degraded or Abandoned in Roman Times

Dikaia: from the mid-3rd century BCE till the 3rd century CE the site was abandoned (*CPCI* no. 643; M. Tasaklaki pers. comm.); pre-Roman size c. 7 ha (Lazaridis 1971b: 51); **Drys:** Classical *polis*, in late Hellenistic times *kome* of Maroneia, but in imperial times, after the foundation of Traianoupolis, *kome* of Traianoupolis (*CPCI* no. 644; Loukopoulou et al. 2005: 501–504; *TIR* K35.I: 25–26); **Messembria-Zone:** *polis* till 3rd century BCE; in Roman imperial times, and after the foundation of Traianoupolis, *kome* of Traianoupolis; in late Hellenistic period perhaps *kome* of Maroneia (*CPCI* no. 651 and no. 647; Loukopoulou et al. 2005: 505–511); pre-Roman walled area 12.3 ha (Loukopoulou et al. 2005: 508; Tsatsopoulou-Kaloudi 2001: 11–14); but the 'real' town occupied an area of only c. 7 ha (or even less from Hellenistic times onwards) (Loukopoulou et al. 2005: 508–509; Tsatsopoulou-Kaloudi 2001: 15); **Molyvoti-Stryme(?):** abandoned in the late 4th century—early 3rd century BCE; limited human activity at the site only from the mid-3rd century CE onwards (*CPCI* no. 650; Psoma, Karadima and Terzopoulou 2008: xlvix–lv; Loukopoulou et al. 2005: 287–288; Arrington et al. 2016; M. Tasaklaki pers. comm.); Classical walled area more than 46 ha; a portion of the site has been lost to erosion (Arrington et al. 2016: 14); we may tentatively assign the built-up area of the town to our 20–40 ha bracket; **Sale:** Classical *polis* of the *peraia* of Samothraki (tentatively identified with modern

Alexandroupolis); in late Hellenistic period *kome* of Maroneia, but in Roman imperial times, after the foundation of Traianoupolis, within the territory of the latter and road station on the *Via Egnatia* (*CPCI* no. 649; Loukopoulou et al. 2005: 547–549; *TIR* K35.1: 51).

Hellenistic Secondary Settlements Operative in Roman Times

Bergepolis: perhaps dependent *polis* controlled by Abdera in Classical times (*CPCI* no. 642; *TIR* K35.1: 21; Skarlatidou 1990: 616); **Doriskos:** (*CPCI*: 871; Loukopoulou et al. 2005: 554–561; *TIR* K35.1: 24–25); **Kalyva:** fort (Loukopoulou et al. 2005: 283).

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CHAPTER 15

Regional Perspectives on Urbanism and Settlement Patterns in Roman Asia Minor

Rinse Willet

1 Introduction

Roman Asia Minor was a vast area and its 'cities' comprised a wide array of settlement types. Although this variety is due in part to the fact that 'cities' can be defined in multiple ways, for instance based on juridical, functional or demographic criteria, even if we use a single definition, enormous variations can be observed. In this chapter no attempt will be made to answer research questions like, 'what is a city in Roman Asia Minor?', 'how did cities function?', or 'how did the urban pattern/network in Asia Minor come into existence?'. Instead, the focus of the following discussion will be limited to two aspects of urbanism, namely the spatial distribution of those cities which were self-governing and the distribution of these self-governing cities among various size brackets, with 'size' being defined as the number of hectares occupied by a particular 'urban' site rather than by its estimated population.

The source material used for tracing self-governing cities and reconstructing their distribution across the landscapes of Asia Minor is mostly textual. Precisely because civic status is only one of multiple criteria which can be used to identify 'cities' or 'towns', the story of cities with a civic status cannot be equated with the story of 'urbanism' in Asia Minor. Throughout Roman Asia Minor villages with remarkable levels of monumentality existed, such as *Korba*, *Trysa* and *Lyrboton* in *Pisidia, Lycia et Pamphylia*, but also *Almoura* in the hinterland of *Ephesos*.[1] Several 'rural' sanctuaries were surrounded by extensive settlements, and places like *Letoon* and *Didyma* rivalled cities in terms of size and monumentality. Conversely, many places with a civic status did not have much in terms of urban amenities, as Pausanias' famous description of the Phocian city of *Panopeus* reminds us.[2] That said, the vast majority of places where 'urban' public buildings are attested as well as most settlements which

1 Kolb 2008: 297–298; Schuler 1998: 259; *I.Ephesos* 3251.

2 Pausanias 10.4.1.

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belonged to the higher brackets of regional settlement hierarchies in terms of size are known to have had a civic status. In that sense, the self-governing cities provide a good starting point for a study of urbanism in the region.

The second focal point of this paper, settlement size, is a commonly used research parameter in modern geography. To reconstruct the sizes of ancient cities, we have to rely on physical evidence provided by archaeology. As is well known, some of the most famous and largest cities of the ancient world were situated in Asia Minor, for instance *Ephesos*, *Pergamon*, *Smyrna*, *Miletos*, *Alexandreia Troas*, *Halikarnassos* and *Kyzikos*. These cities feature prominently in many works on ancient urbanism.[3] However, while the coastal districts of the Roman province of Asia boasted a remarkable number of large cities, such cities were relatively rare in other parts of Asia Minor. This means, among other things, that those cities which dominated the urban hierarchies of other districts often were much smaller than their counterparts in the western regions. For example, while cities such as *Sinope*, *Kyaneai*, *Sagalassos*, Pisidian Antioch, *Perge*, *Taouion* or *Anazarbos* were much smaller than *Ephesos* or *Smyrna*, they still played a significant role in their regional contexts as major administrative centres, important trading places and sometimes also as significant places of production. Therefore the relative importance of the self-governing cities of Roman Asia Minor can be studied only by adopting a regional perspective.

After an elucidation of the geographical distribution of self-governing cities and their distribution among various size brackets, the spatial patterns revealed by these inquiries will be refined by pursuing three lines of investigation. The first of these will focus on the distribution of natural resources, including that of good arable land. This aspect has been cited in literature on urbanism as an important factor in shaping cities and patterns of cities.[4] The second approach will focus on the connectivity of the region. Particularly in recent literature on the workings of the ancient economy, connectivity and its impact on economic performance and urban hierarchy have been highlighted.[5] Finally, an attempt will be made to establish to what extent the system of self-governing cities operated as an integrated marketing system.

3 Gates 2011; McEvedy 2011.
4 E.g. Faroqhi 1984.
5 Scheidel et al. 2007; Wilson 2011; Erdkamp 2014.

2 A Brief Geographical Introduction

The regions that are covered by this contribution more or less overlap with modern Turkey. From the mid-first century CE this area comprised six provinces: *Asia*, *Pontus et Bithynia*, *Galatia et Cappadocia*, *Pisidia*, *Lycia et Pamphylia* and *Cilicia*.[6] However, from a geographical point of view it makes more sense to distinguish between coastal and land-locked regions and to put those regions which bordered the Black Sea, the Aegean or other parts of the Mediterranean in separate categories. The land-locked districts, in their turns, may be divided into three large units. This leads to a division into seven sub-regions, namely European Turkey, Western Anatolia, the Black Sea Coastlands, the Southern Coastlands, the Central Plateau, Eastern Turkey and South-East Turkey.

Western Anatolia has a Mediterranean climate and the landscape is marked by the valleys of the *Hermos*, *Maiandros*, *Kaïkos* and *Kaystros*, with hilly to mountainous areas outside these river valleys, such as the Troad, Caria and Phrygia. The same climate is present in the Southern Coastlands. Because the latter region comprises large tracts of hilly to mountainous land, it is rather fragmented, with the Taurus Mountains running parallel to the coast. The border area between *Pisidia*, Galatia and Phrygia contains many lakes. Large tracts of flat or gently sloping land were to be found in the Pamphylian coastal plain and the plain of *Cilicia Pedias*. The Central Plateau consists of a dry steppe to semi-desert landscape west and south of Lake Tuz. The eastern part is slightly higher in elevation and consists of an eroded and broken landscape caused by small streams and rivers. The river Kızıl Irmak (*Halys*) runs through this area, and the Euphrates forms its eastern border. The Central Plateau has low and often unpredictable precipitation and the summers are hot and dry, while the winters are cold, particularly in Cappadocia. The Black Sea Coastlands have much precipitation with hot summers but mild winters. The topography of this area is characterised by the forested range of the Pontic Mountains, which run parallel to the coast. The western part of this regions contains a few lakes, such as Lake Iznik. European Turkey has a climate similar to that of the Black Sea Coastlands. This area is less mountainous and is delimited by the river Ergene.

Asia Minor has a long history of urban settlement, which predates the Roman Empire. The palaces and settlements of the Hittites, but also later Phrygian and Achaemenid settlements could be sizable and possessed large build-

6 Marek 2010: Farbkarte 7.

ings and monuments. The *poleis* of the Classical and particularly Hellenistic periods formed the foundation of the urban pattern of Asia Minor under the Roman Empire. In this chapter, the chronological focus lies on the first three centuries CE. This period captures the urban pattern at its height during Roman times, although some cities would continue to flourish after this period, or even expand, such as Constantinople.

3 Self-governing Cities in Asia Minor: Sources and Distribution Patterns

In many studies dealing with self-governing cities in the western provinces of the Roman Empire, these cities are divided into three groups: *coloniae*, *municipia* and peregrine *civitates*. In the case of Asia Minor these legal statuses are of limited importance, although a partial exception must be made for *coloniae*.[7] Colonial charters have been attested for 24 places in Asia Minor. Early examples include Caesarean colonies on the Black Sea Coast and along the Dardanelles, and several Augustan *coloniae* were established in *Pisidia* as part of a policy aimed at controlling the unruly *Homonadenses* who lived in this region.[8] Yet by and large, no sustained policy of colonisation was implemented in Asia Minor, and after the Augustan period only honorary *coloniae* were established.[9]

From an institutional point of view most self-governing cities in the Greek East looked like the *poleis* of the Classical and Hellenistic world. In almost all of these cities we find evidence of a *boule* (council) and an *ekklesia* (assembly) or *demos*.[10] However, ancient sources also use *polis* as a generic term for 'city' or 'town', regardless of its administrative or juridical status. Therefore multiple sources must be used to establish the self-governing status of particular cities. Fortunately, much of the basic groundwork was done long ago by scholars such A.H.M. Jones, Louis Robert and Hans von Aulock.

7 Within the boundaries of modern Turkey only one *municipium* has been identified on the basis of numismatic evidence. This *municipium* is *Koila* on the Thracian Chersonese; Broughton 1938: 734; Head et al. 1911: 259.

8 Levick 1967; Mitchell 1993.

9 E.g. *Nikomedeia*, which became a *colonia* under Diocletian; Broughton 1938: 734; *CIL* III, 326.

10 There is much discussion in the literature on the nature of the *polis*. In this paper the term *polis* will be used to refer to a self-governing city that was officially recognised as such.

Apart from inscriptions, the most important ancient sources are Strabo,[11] Pliny the Elder,[12] Ptolemy[13] and Hierokles.[14] Books 11–14 of Strabo's *Geography* (dated 4 BCE–6 CE with revisions in 18 CE) describe Asia Minor. Strabo came from this region, and the level of detail of some of his descriptions of many Anatolian cities suggests he visited them personally.[15] Pliny's description of Asia Minor in books V and VI of his *Natural History* (dated 77 CE) provides detailed accounts of the assize districts (*conventus*) of the province of Asia, suggesting that he used official lists of self-governing communities.[16] Book V of Ptolemy's *Geography* (probably dated somewhere between 127–141 CE) lists the rivers, mountains and cities of Asia Minor and even provides coordinates. Unfortunately, many of these coordinates are unreliable and his descriptions lack detail. What is particularly striking is that Ptolemy lists many more towns for Cappadocia and Armenia than Strabo or Pliny. Many of these places remain unlocated.[17]

Inscriptions not only confirm the self-governing status of cities but also allow us to put many of these cities on the map.[18] Of particular interest is a famous inscription from *Ephesos* which not only lists the assize centres of the province of Asia but also all of the self-governing communities which belonged to their districts. Together with Pliny's detailed account of the same assizes, this list is an excellent starting point for identifying the self-governing cities of Roman Asia.[19] For other parts of Asia Minor we can rely on numismatic evidence, since throughout the first three centuries CE the right to mint local coins was a privilege held exclusively by self-governing communities.[20]

11 Strabo lists some 365 places as still existing in Asia Minor, of which 29 villages/settlements, 10 sanctuaries, 6 tribes, 25 fortresses, 3 harbours, 24 unspecified places and 258 as *polis*, *polichnion* or *polismaton*.

12 Pliny lists some 388 places as still existing in Asia Minor, of which 8 *urbes*, 12 *civitates*, 5 *castella*, 11 tribes, 16 *civitates liberae*, 1 *civitas libera et immunis*, 5 *coloniae*, 2 sanctuaries, 7 ports, 7 unspecific places, 2 *montana* or mountain villages. The other 311 are in part described as part of the assizes or as *oppida* or towns.

13 Ptolemy lists some 610 places for Asia Minor, the vast majority (n=605) *poleis*.

14 An appendix compiled by Jones from the *Synekdemos* by Hierokles and writings by George of Cyprus, both sources of Late Antiquity, lists 465 places in the research area, which must be regarded as official administrative units for Late Antiquity.

15 Syme 1995: 363–367.

16 Jones 1971: 491–492.

17 It is tempting to think this is related to the short-lived Roman intervention in Armenia under Trajan, which perhaps increased the knowledge of the geography of those parts.

18 E.g. *MAMA* XI, 343.

19 Jones 1971; Habicht 1975; Dalla Rosa 2012: 262–263; sources include *RDGE* 52 (51–50 BCE), *Lex portorii*, ll. 88–96 (17 BCE), *I.Didyma* 148 (40 CE), *I.Ephesos* 13 (Flavian times).

20 Weiss 2005: 58–60; using multiple sources, including Head 1911, Hans von Aulock's regional

If all these sources are combined, 443 cities or communities which certainly were self-governing can be identified and an additional 15 whose self-governing status remains uncertain. No fewer than 428 of the central cities or central places of these 458 self-governing communities could be located, and for approximately 271 self-governing communities, physical remains of a central settlement are attested either archaeologically or historically (for example because Strabo refers to public buildings). The fact that nothing is known about the physical lay-outs of 187 (possible) cities can be largely attributed to the fact that excavations have focussed on the largest sites with the most significant monumental remains. Only during the past few decades have some attempts been made to investigate the sites of less distinguished cities, such as *Komana Pontika* or *Pompeiopolis*.

As only very few self-governing communities are known to have lacked an urban centre or a town-like central settlement, it seems reasonable to assume that most of the (443–271=) 172 self-governing communities whose central settlement has not been identified on the ground did have such a settlement, although many of these central places may have been small. Of course, the number of settlements which make an appearance in historical accounts or geographical surveys is much larger than 446, but none of these places can be confirmed as self-governing based on the published epigraphic, numismatic or archaeological evidence. Furthermore, many subordinate villages (*komai*) are attested through epigraphy.[21] These villages must have played a pivotal role in the lives of the rural populations of Asia Minor, but that does not alter the basic fact that the self-governing cities constituted the primary tier of central places.

Table 15.1 and Figure 15.1 provide an overview of the geographical distribution of the self-governing cities in Asia Minor. It is immediately clear that most of them were located in Western Anatolia and Asia. Remarkably, the Southern Coastlands, but particularly the western part of this region, corresponding to the Roman province of *Pisidia, Lycia et Pamphylia*, has the densest distribution of self-governing cities of all of Asia Minor. The Central Plateau, corresponding to the province of *Galatia et Cappadocia*, is sparsely settled as are the Black Sea Coastlands (*Pontus et Bithynia*). In the province of *Asia* the high number of self-governing cities, particularly in Ionia, but also along the Dardanelles, reflects the fragmented political landscape of Classical times.[22] These areas

numismatic studies for Asia Minor, and the Roman Provincial Coinage database, some 328 mints for second/third-century-CE Asia Minor could be identified.

21 An overview of these is provided by Schuler 1998.

22 Hansen and Nielsen 2004.

TABLE 15.1 Number of self-governing cities (n=443 certain and 15 possible) using the provincial division of 117 CE and geographic regional divisions. Note that 30 cities have been left out since they could not be located; 8 self-governing cities/communities which were situated on the eastern Aegean Islands have been included.

Province/geographic region	Area (in km²)	No. of self-governing cities (% of total)	No. of self-governing cities per 1,000 km²
Asia	130,388	198 (46.8%)	1.51
Pisidia, Lycia et Pamphylia	38,619	86 (20.3%)	2.23
Cilicia	37,738	48 (11.4%)	1.27
Galatia et Cappadocia	255,036	52 (12.3%)	0.20
Pontus et Bithynia	64,921	19 (4.5%)	0.29
Outside provinces within research area		25 (5.8%)	
European Turkey	24,853	14 (3.3%)	0.56
Western Anatolia	105,590	177 (41.4%)	1.68
Black Sea Coastlands	107,565	20 (4.7%)	0.19
Central Plateau	194,588	48 (11.2%)	0.25
Southern Coastlands	133,587	155 (36.2%)	1.16
Eastern Turkey	162,551	3 (0.7%)	0.02
South-East Turkey	89,672	3 (0.7%)	0.03

were among the first to be settled by Greek immigrants, and some of the oldest Greek cities of Asia Minor are situated here (e.g. *Miletos*, *Kyzikos*, *Smyrna*, *Halikarnassos*). Dense settlement is also found along the river valleys of the *Maiandros*, *Hermos* and *Kaystros*. These valleys contained large amounts of fertile land and received many Hellenistic foundations. Most of these settlements flourished throughout the Hellenistic and Early Imperial periods (e.g. *Laodikeia* on the *Lykos*).[23] The hilly areas of Phrygia are less densely settled, and most of the cities which have been identified in this region were relatively small (e.g. *Blaundos*, which covered 16.5 ha).

The western half of the Roman province of *Pisidia, Lycia et Pamphylia* consists of a fragmented landscape of hills and valleys, but its eastern half comprises the large coastal plain of Pamphylia. Many cities are concentrated on the Lycian Coast, and a high concentration is also apparent in *Pisidia* (e.g.

23 Cohen 1995; Ma 1999; Aperghis 2004.

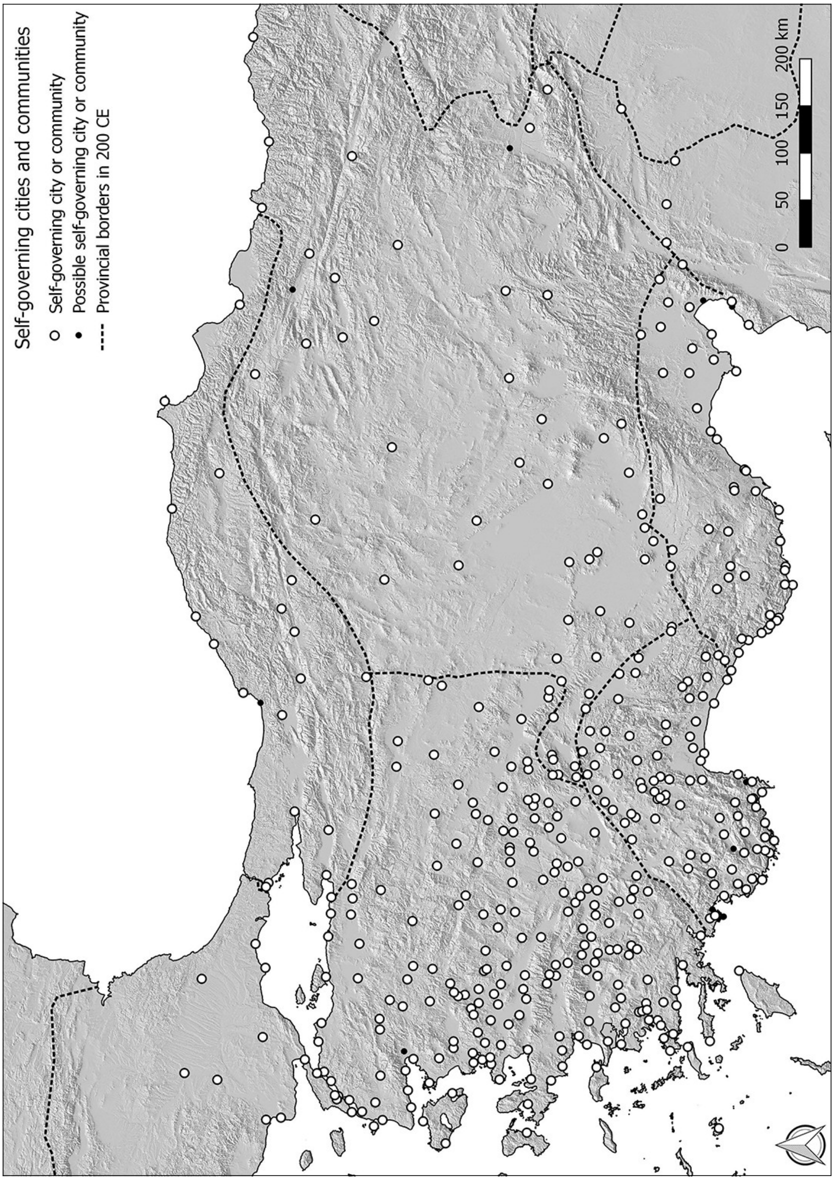

FIGURE 15.1 Map showing the self-governing cities of the Roman Imperial period

Patara, Phaselis, Sagalassos, Kremna, Adada). A handful of important cities were situated on the Pamphylian plain (*Perge, Aspendos, Attaleia, Side*). Cilicia can also be divided into two parts. In Rough Cilicia many cities are located on the coast or on the slopes of the Taurus Mountains (*Selinous, Kestros, Anemorion*). In *Cilicia Pedias*, a large fertile plain of the rivers *Pyramos* and *Saros* was home to several medium-sized cities (e.g. *Tarsos, Mallos, Magarsos* and *Anazarbos*).[24]

The area of *Galatia et Cappadocia* was sparsely settled with cities (e.g. *Ancyra, Taouion, Mazaka, Ikonion*). Mitchell argues that on the Central Plateau, particularly in Galatia, few self-governing cities existed before the Roman annexation. This created good opportunities for Italian businessmen (*negotiatores*) to move in and seize large tracts of land after the death of King Amyntas in 25 BCE. The large estates which emerged in this period might have depressed urban development.[25] Thonemann argues for a similar scenario in Roman Phrygia, although he identifies the small cities that existed in this region as important power centres for the new elites.[26] *Nikopolis* and *Sebasteia* were the most prominent self-governing centres of north-eastern Phrygia. *Melitene* formed a central node of the eastern *limes*.[27]

The province of *Pontus et Bithynia* was delimited by the Pontic Mountains, which run parallel to the coast. This area, too, had few self-governing cities. Some of the oldest towns of this region go back to Classical times (*Trapezous, Sinope, Amastris* and *Herakleia Pontika*) and were situated on the coast. In addition to these Greek-type cities, two 'temple-states' were located here, namely *Komana Pontika* and *Zela*.[28] In the west, some cities which had been founded in Hellenistic times became very large and important (*Nikomedeia, Nikaia, Prusa*). The pattern of cities in this province was more or less crystallised for the Roman period when Pompey organised it as province in 63 BCE.[29]

In the European part of Turkey, corresponding to the eastern part of the Roman province of Thracia, few self-governing centres existed. *Bizye, Ainos* and *Aproi* formed the oldest centres, of which *Aproi* was refounded as a Roman *colonia*. In the interior districts *Adrianoupolis* and *Plotinoupolis* were the most important self-governing centres. Both cities were refounded during the early

24 Rauh et al. 2009.
25 Mitchell 1993: 157.
26 Thonemann 2013.
27 Caesarea: Jones 1963: 318; Haensch 1997: 272–276, 585–587. Melitene: Procop. *Aed.* 3.4.18; Hild and Restle 1981: 233–236; Mitford 1980: 1186.
28 Erciyas 2009.
29 Marek 1993.

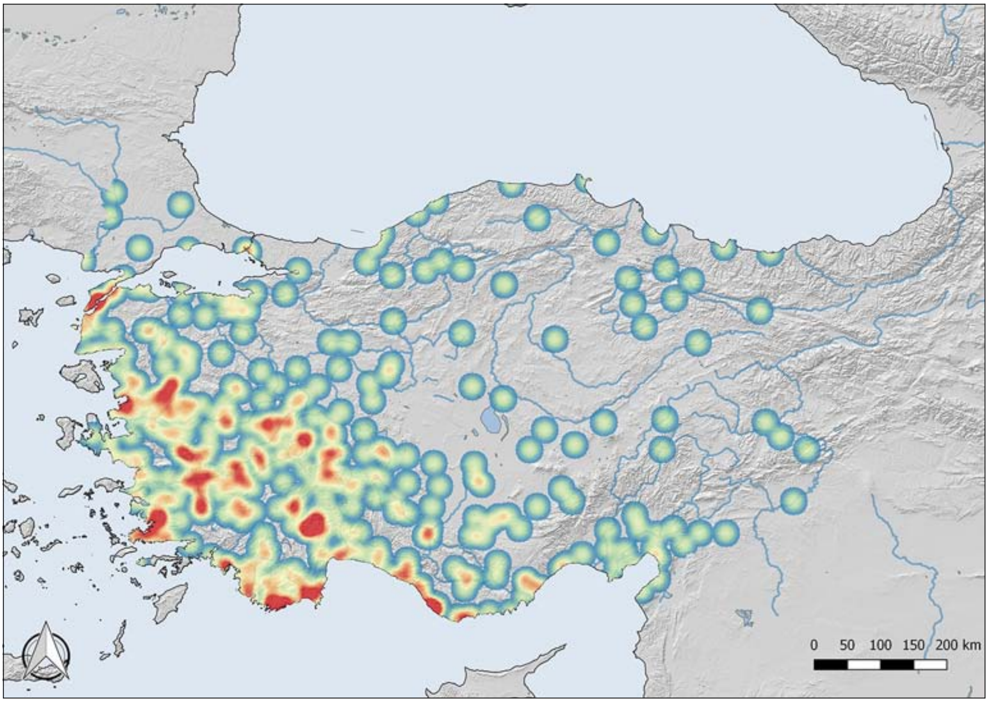

FIGURE 15.2 Heat map of the self-governing cities in the late second/early third century CE. The radius used for this heat map was 20 km.

second century CE, when Hadrian reorganised the province of Thracia (which had been incorporated as a province in 45 CE).[30] On the Chersonese a few older cities were located, including *Sestos* and *Callipolis*.

A heat map based on the self-governing cities (Figure 15.2) reveals the clustering of cities even better. Clear clusters appear on the Dardanelles, the Aegean coast and the coasts of Lycia and Rough Cilicia, but also along the river valleys and into *Pisidia*. This impressionistic conclusion is confirmed by Nearest Neighbour Analysis (Table 15.2).[31] The average distances reveal that the self-governing cities of Western Anatolia and the Southern Coastlands are located in close proximity to each other. The cities of European Turkey, the Central

30 Von Bredow, 'Thracia', *DNP*.

31 A distance matrix was created in QGIS using a linear output (N*k × 3) whereby the two nearest neighbours are measured from each city (k=2). This results in a list of measurements, from which the average distance and the minimum and maximum distances are taken. This method is adopted from Bekker-Nielsen 1989, who applied this analysis successfully to better understand the urban pattern of Gaul.

TABLE 15.2 Results of Nearest Neighbour Analysis of the urban pattern in Asia Minor during the late second and early third centuries CE. Distances are in km.

Geographic region	Number of self-governing cities and communities	Average distance	Minimum distance	Maximum distance
Western Anatolia	177	17.4	3.4	64.0
European Turkey	14	42.9	2.5	119.4
Black Sea Coastlands	20	70.1	21.3	181.9
Southern Coastlands	153	18.1	1.9	151.3
Central Plateau	48	44.8	11.3	130.6

Plateau and particularly the Black Sea Coastlands are situated much farther apart. The maximum distances generally reflect the existence of isolated cities or cities situated at the border of a particular region. Cities of the latter type were often situated in closer proximity to cities in one of the other regions. Therefore the maxima are less informative than the averages and the minimum distances.

In terms of interaction between centres, if Western Anatolia and the Southern Coastlands are assumed to be flat plains and if walking speed is set at of 5 km per hour, the average walking distance between cities in these two regions would have been 3–4 hours, with many cities being located significantly closer to each other. For the other regions such a journey would have taken between 9 hours and 14 hours on average. The realities of Turkish topography mean that actual travelling distances were considerably higher. This shows the settlement systems of these regions would have been completely dysfunctional unless other centres, such as villages, sanctuaries or road stations, filled the huge gaps between the self-governing cities.

4 City Sizes

The *Pergamon*-born physician Galen famously noted that the city had 40,000 citizens, from which he deduced that the total number of inhabitants must have been at least 120,000.[32] This statement was used by Beloch to posit a total

32 Galen, *De Propriorum Animi Dignotione et Curatione* 9 (Kühn 5.49 = *Corpus Medicorum Graecorum* 5.4.1.1.33); Radt 1999: 57–59; Wulf 1994: 166; Halfmann 2004: 83.

population of between 120,000–180,000 for the city and its territory.[33] Other sources also refer to city sizes in Asia Minor without specifying the number of city dwellers or citizens. In the absence of population figures for the cities of Roman Asia Minor, the best way of obtaining at least a rough idea of variations in city size is to collect evidence relating to the size of occupied areas.[34]

Ideally, the area of a site is measured after full excavation, allowing not only a precise estimate of the size of the built-up area, but also mapping of diachronic changes. In reality the archaeological records of most cities in Asia Minor are poorly known, with detailed data being available for only a tiny number of sites (e.g. *Ephesos* and *Sagalassos*). For obvious reasons archaeological projects have favoured the most monumental cities, so that conclusions about the smaller cities have to be derived from epigraphic reconnaissance or from archaeological descriptions of surface remains. Many places remain very relatively obscure.[35]

The approximate sizes of a considerable number of cities can be gauged by using existing archaeological studies, but in the case of obscure places the only available option is to use of GIS and satellite imagery (Google Earth) and to combine these sources of information with published plans of surface remains. In some cases the locations of necropoleis, the course of city walls or the spatial distribution of monuments and buildings help to give us an idea of the size of a settlement. Particularly if published sizes or maps can be checked with the help of satellite imagery measurements, fairly accurate estimates can be provided (e.g. *Perge*). It must, however, be freely admitted that these methods do not always yield reliable results, as in many instances the remains which are most visible from the air are (Hellenistic) fortification walls, which often envelop an area much larger than that which was occupied by public or domestic buildings.[36] For places that are overbuilt, like *Smyrna* and *Trapezous*, the use of the street plan and older publications showing more surface remains can be highly useful, but the estimates derived from these publications must be regarded as rough.

Wherever possible, an attempt was made to obtain figures specifically pertaining to the Roman Imperial period, but due to the obscure nature of some sites this was not always possible. Still, for 169 self-governing cities size esti-

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33 Beloch 1886: 236.

34 For attempt to use ancient mitochondrial DNA to reconstruct ancient population sizes, see Ottoni et al. 2016; Willet 2012; Chamberlain 2006: 127–128.

35 E.g.: *Alia*: Drew-Bear 1980: 951; *Midaion*: Humann and Puchstein 1890: 23; Aulock 1987: 33; *Soatra*: Aulock 1976: 48; Belke 1984: 223.

36 Hansen 2006: 42–47.

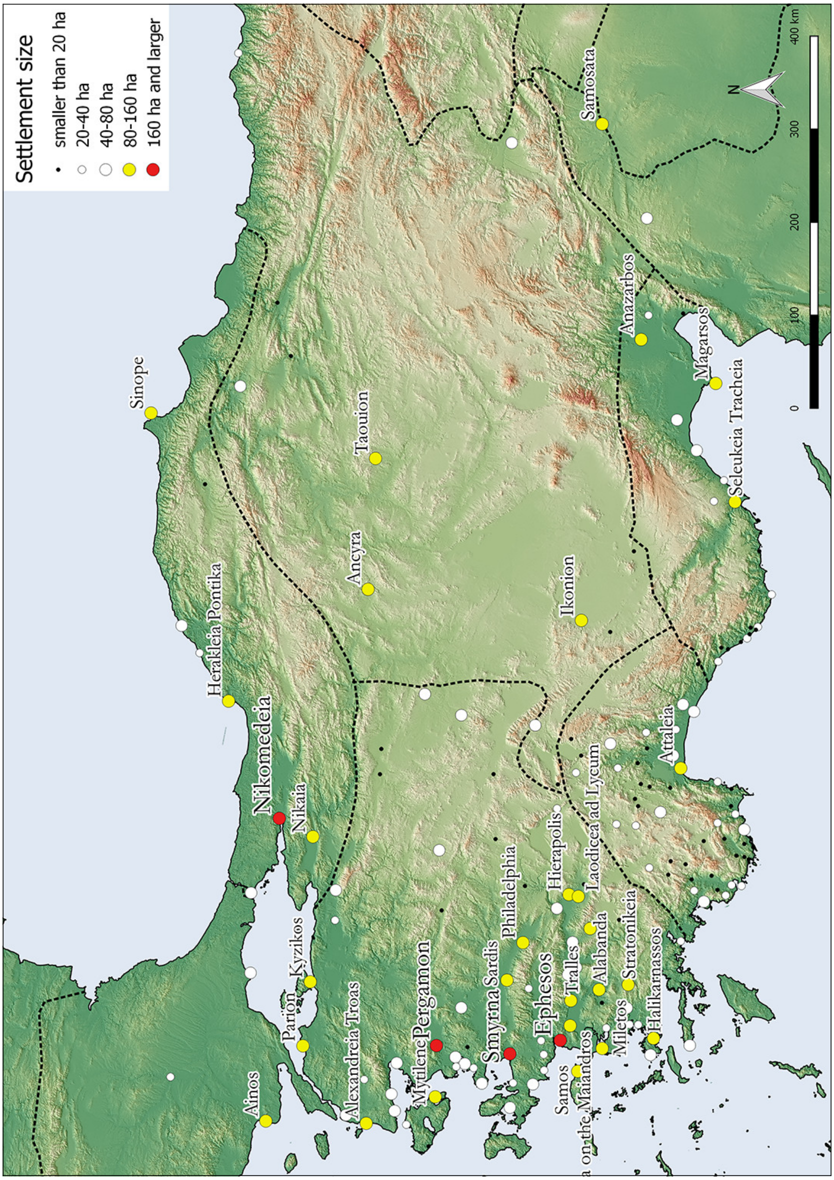

FIGURE 15.3 City sizes in Roman Asia Minor

mates (of varying quality) could be obtained.[37] Without exception the largest cities are located in Western Anatolia and in the western part of the Black Sea Coastlands (Fig. 15.3). It is also clear that the larger cities (> 80 ha, but this holds true to some extent for cities over 40 ha as well) were located either directly on the coast or in close proximity to it. Western Anatolia not only contains 3 of the 4 largest cities (> 160 ha; *Ephesos*, *Pergamon*, *Smyrna*), but many large cities belonging to the 80–160 ha bracket were situated here as well, both around the Sea of Marmara (*Kyzikos* and *Parion*) and further inland in the *Maiandros* Valley (*Hierapolis*, *Laodicea ad Lycum*, *Aphrodisias*, *Tralles*).

The region of *Pisidia, Lycia et Pamphylia* had the densest network, but this network consisted mostly of small cities, the largest cities being situated in western *Lycia* (*Telmessos*—67 ha) and in the Pamphylian plain (*Attaleia*, *Perge*, *Side*, *Lyrbe*). *Adada* (42 ha) was the largest city of *Pisidia*, followed by *Sagalassos*. Antioch was technically part of *Galatia*, but it was the largest city in this area. The cities on the coast of Rough Cilicia were small, but a few large cities existed in *Cilicia Pedias* (*Anazarbos*, *Magarsos*, *Seleucia ad Calycadnum*). On the *limes*, *Samosata* and *Melitene*, both legionary fortresses, were large but isolated settlements. In the province of *Galatia et Cappadocia* the cities of *Ancyra* and *Taouion* were large but isolated. In this region the cities of *Mazaka Caesarea* (overbuilt by modern Kayseri) and *Ikonion* (Konya, also overbuilt) are also likely to have belonged to the 80–160 ha bracket. The cities of Pontus were not very large, with *Herakleia Pontika* being the largest (80 ha). In contrast, Bithynia was home to two large cities, *Nikomedeia* (184 ha) and *Nikaia* (137 ha). On the other shore of the Sea of Marmara *Byzantion* (70 ha) and *Perinthos* (61 ha) can be identified as the largest centres.

If we assign all cities for which size estimates are available to size categories, it appears that most of these cities occupied less than 20 ha (Table 15.3). A few large cities might be missing as they are overbuilt by modern cities. Yet it seems highly likely that the vast majority of the 301 self-governing cities that could not be measured belonged to the 1–20 ha bracket.

The analysis of the urban system of Roman Asia Minor can be pushed a bit further by using rank-size analysis.[38] In many publications the shapes of rank-size graphs for the urban systems in various parts of the modern world have

37 These consist of 145 sizes of self-governing cities, 3 of possible self-governing cities and the other sizes are of villages, sanctuaries and forts.

38 Pounds 1969: 154, uses the urban hierarchy of towns and cities in Roman Britain and Gaul to identify regional capitals and the chief commercial, administrative and military centres in an urban network using the urban area (as a proxy of population) and the rank of cities. De Vries 1984: 85–120, applied rank-size analyses to the cities of early modern Europe.

TABLE 15.3 Self-governing cities in Roman Asia Minor per size category

Size category (in hectares)	Number of self-governing cities
Over 160 ha	4 (2.4%)
80–160 ha	23 (13.6%)
40–80 ha	38 (22.5%)
20–40 ha	42 (24.9%)
Less than 20 ha	62 (36.7%)

been interpreted as indicating levels of economic development and integration, and some archaeologists and ancient historians have used this approach to assess levels of economic integration in the Roman Empire. Publications of this type attach much significance to the question whether or not the rank-size distribution of the cities of a particular urban system obeys the 'rank-size rule', which is also known as 'Zipf's law'. If the rank-size distribution of an urban system obeys this rule, it will appear as a straight line with a slope of approximately minus 1 in a graph which displays city ranks and city sizes on a logarithmic scale.[39]

The shapes of rank-size graphs which do not obey the 'rank-size rule' are also thought to be revealing of underlying economic structures. The rank-size distributions of many past societies appear to have been 'concave' rather than linear, meaning that the largest cities of these societies were smaller than 'predicted' by Zipf's law, while medium-sized cities are numerically 'over-represented'. It has been suggested that such concave distributions point to a low level of system integration, the underlying idea being that the economic systems of the societies in question were characterised by low levels of inter-regional exchange and human mobility which did not 'allow' the largest cities of the urban system to grow to their full potential.[40]

39 In its simplest form, Zipf's law is written as $x(k)=x_m/k$, with k as rank, x as the size and x_m as maximum size in a set of sizes. See Cristelli et al. 2012. For recent applications to Roman cities, see Marzano 2011 and Hanson 2016. For a critique of the latter's use of rank-size analysis, see Donev and Willet 2017.

40 De Ligt 2016 interprets the concave shape of the rank-size graphs for the urban systems of Peninsular and North Italy as pointing to the existence of a 'modular' urban system in which interactions between cities and their administrative territories were more important than exchange of goods among cities. As pointed out by Johnson 1980: 244–245, concavity may be caused by incomplete sampling (partitioning), resulting in the exclu-

During the past couple of decades various economists and economic geographers have criticised the tendency to use the 'rank-size rule' as a yardstick to assess levels of economic integration as overly reductionist or simplistic. In a book which appeared in 2004, Taylor, for instance, urged scholars to account for the shapes of networks of cities which are found in the real world rather than to get stuck on what he calls a 'hierarchy fetish'.[41] Linguists and mathematicians long ago demonstrated that the rank-size rule can emerge from a random set of data.[42] In a similar vein Krugman suggested that models of random city growth go a long way to explaining why the rank-size distribution of the United States has more or less faithfully obeyed the rank-size rule for more than a century. Adding an interesting twist to previous theories regarding the capacity of random interactions to generate rank-size distributions obeying 'Zipf's law', he identifies the uneven distribution of landscape features and natural resources as important sources of 'randomness'.[43]

Bearing these methodological problems in mind, we may take a look at the rank-size distribution of the cities of Roman Asia Minor (Fig. 15.4). It immediately appears that the graph showing this distribution has a concave shape. As many specialists have pointed out, concave distributions may result from the 'pooling' of city-size data relating to multiple regional urban systems rather than from a genuine shortage of very large cities caused by low levels of economic integration. In the case of Roman Asia Minor, however, the rank-size graphs for at least some of the individual Roman provinces are also concave, for instance those for the provinces of *Asia* and *Pisidia, Lycia et Pamphylia* (Figs. 15.5 and 15.6).

Based on these graphs it seems reasonable to rule out 'pooling' as the most likely explanation for the shape of the rank-size curve for Asia Minor. On the other hand, it would be wrong to conclude that the concave graph for this part of the Roman Empire can be fully accounted for in terms of limited economic integration. Bearing Taylor's warning in mind, it seems preferable to examine the relationships between the shapes of regional urban hierarchies and under-

sion of the largest city or cities of a dendritic urban network from the data set or from 'pooling' involving the amalgamation of (parts of) multiple autonomous urban networks.

41 Taylor 2004: 25; Taylor further suggested (ibid. 16) that the straight-line gradient on a rank-size plot is the result of a myriad of forces acting on cities, having a *de facto* random effect on city growth.

42 For a critique of approaches based on the rank-size rule from a linguistic perspective on the mathematics see, for instance Miller and Chomsky 1963: 463–464; Mandelbrot 1966.

43 Krugman 1996: 412, 416. The differences caused by the landscape lie in movement possibilities, presence of natural resources, variation in rural population, religious elements in the landscape and so on.

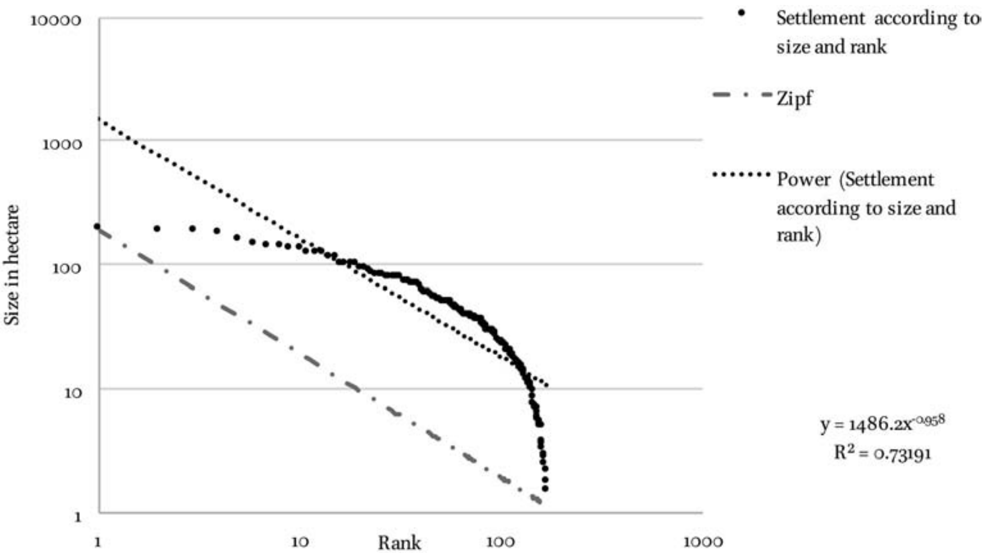

FIGURE 15.4 Rank-size analysis for the self-governing cities of Roman Asia Minor (n=145). Logarithmic scale for x and y axes

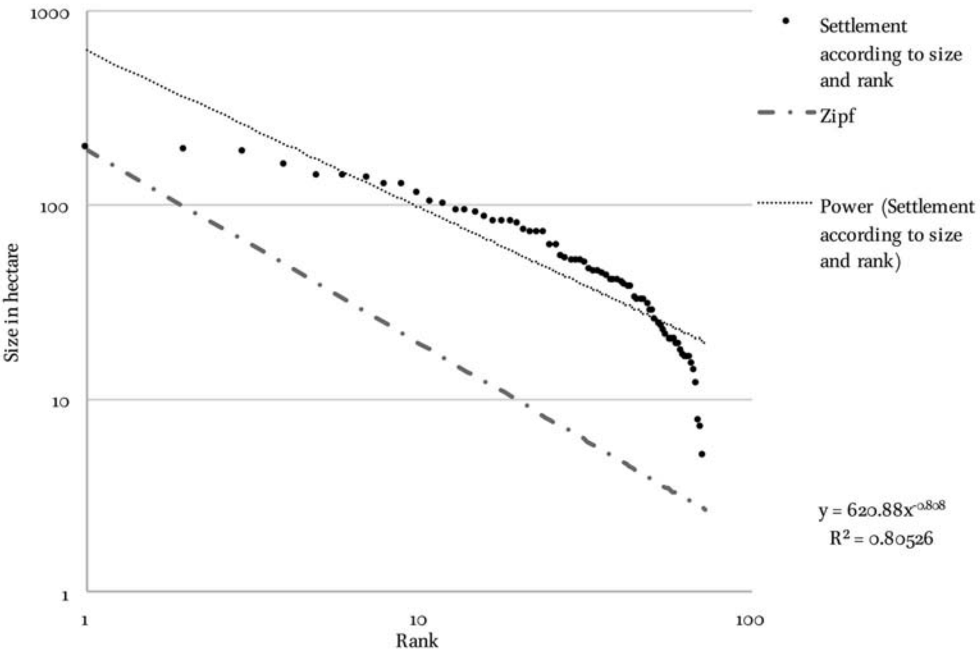

FIGURE 15.5 Rank-size analysis for the self-governing cities in the province of *Asia* (n=57). Logarithmic scale for x and y axes

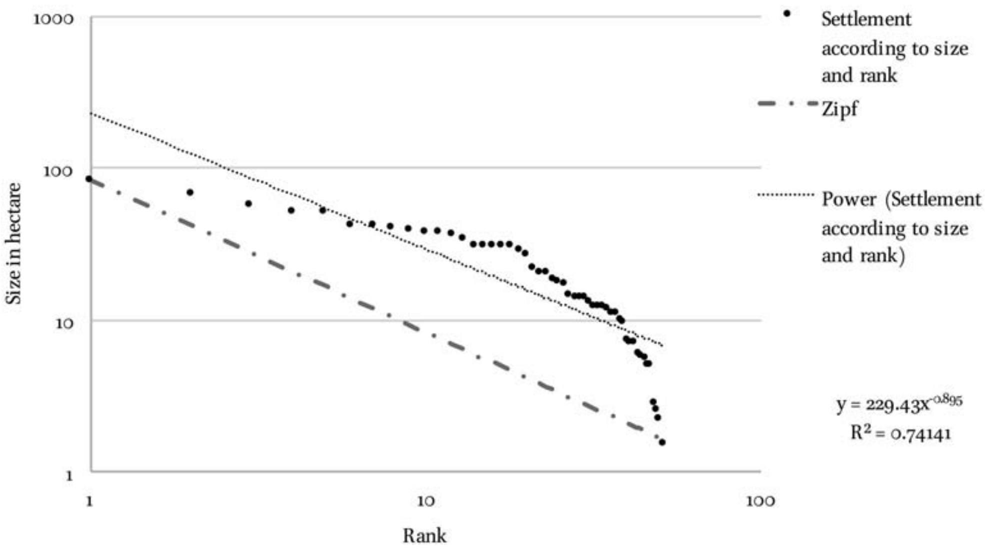

FIGURE 15.6 Rank-size analysis for the self-governing cities in *Pisidia, Lycia et Pamphylia* (n=47). Logarithmic scale for x and y axes

lying economic structures from multiple angles. In the final part of this paper, I will attempt to shed some additional light on these relationships by focusing on three factors which might have played a significant part in shaping the regional urban hierarchies of Roman Asia Minor. The first two of these factors are the spatial distribution of natural resources and connectivity. In the final section an attempt will be made to assess to what extent the self-governing cities of Asia Minor can be analysed as constituting a market system capable of servicing a large proportion of the rural population.

5 Natural Resources

Given the enormous diversity of landscapes in Roman Asia Minor, it comes as no surprise that natural resources were unevenly spread. In Antiquity Rough Cilicia and Pontus were renowned for their timber.[44] The presence of good marble at *Dokimeion* and granite near *Alexandreia Troas* gave rise to long-distance trade in stone. However, because agriculture is seen as the most important economic activity in the Roman world, the primary focus of this section will be on the agricultural potential of the area.[45]

44 Meiggs 1982.

45 The agricultural potential has been identified as an important explanatory factor for the pattern of cities in the Ottoman period. See Faroqhi 1990: 147–148.

As no ancient agricultural censuses exist, the best alternative is to use data relating to agricultural production in Turkey before the widespread adoption of modern techniques and practices, such as the use of chemical fertilisers. In Turkey the first agricultural census was carried out in 1927. At this time Turkish agriculture was still overwhelmingly traditional.[46] Of the total inventoried area of 772,340 km^2, 37% was used for grazing, 18% was woodland, 13% consisted of stony soils, and 31% was arable land.[47] Of the land under cultivation (c. 4 million hectares), 89.5% was used for cereals, 3.9% for legumes, and 6.6% for industrial plants.[48] It follows from this that the figures for cereals give a good indication of agricultural potential.

From the data collected for the 1927 census it is immediately clear that production of cereals was highest in Western Anatolia and European Turkey (Fig. 15.7). The Southern Coastlands produce little grain, with the exception of Cilicia Pedias. The Central Plateau produced relatively small amounts of cereals, although production was higher in the areas east of Lake Tuz towards the Pontic Mountains and Ankara. The location of the largest cities of early-twentieth-century Turkey, such as Izmir, Bursa, Ankara and especially Istanbul, roughly correlated with the geographical distribution of the main grain-producing areas.

When we perform the same exercise for the self-governing cities of Roman Asia Minor, some interesting conclusions can be drawn. On the one hand, the striking concentration of large cities in the coastal districts of the Roman province of Asia can easily be accounted for: these were the areas where production of cereals was highest in 1927. Conversely, the low levels of grain production in the Central Plateau help to explain the paucity of self-governing cities in this region in the Roman period. In 1927 the agricultural focus of the Central Plateau lay on live-stock rearing, with the highest number of animals being registered in the districts of Konya (518,095), followed by Ankara (440,150).[49]

At the same time an examination of the 1927 data reveals some oddities which call for an explanation. For instance, the relatively high level of cereal production in the northern and eastern parts of the Central Plateau is at odds with the striking dearth of self-governing cities in Early Imperial times, with *Ancyra* and *Taouion* being the only large cities in this part of Roman Asia Minor.

46 Raschid 1932; Stratil-Sauer 1933; Riza 1935; Öztürk 2012: 71.

47 Riza 1935: 4.

48 Industrial plants are potatoes, beets, onions, garlic, saffron, cotton, flax, sesame seed, tobacco, opium.

49 Riza 1935: 93–99, recalculated in *Grossvieheinheit*.

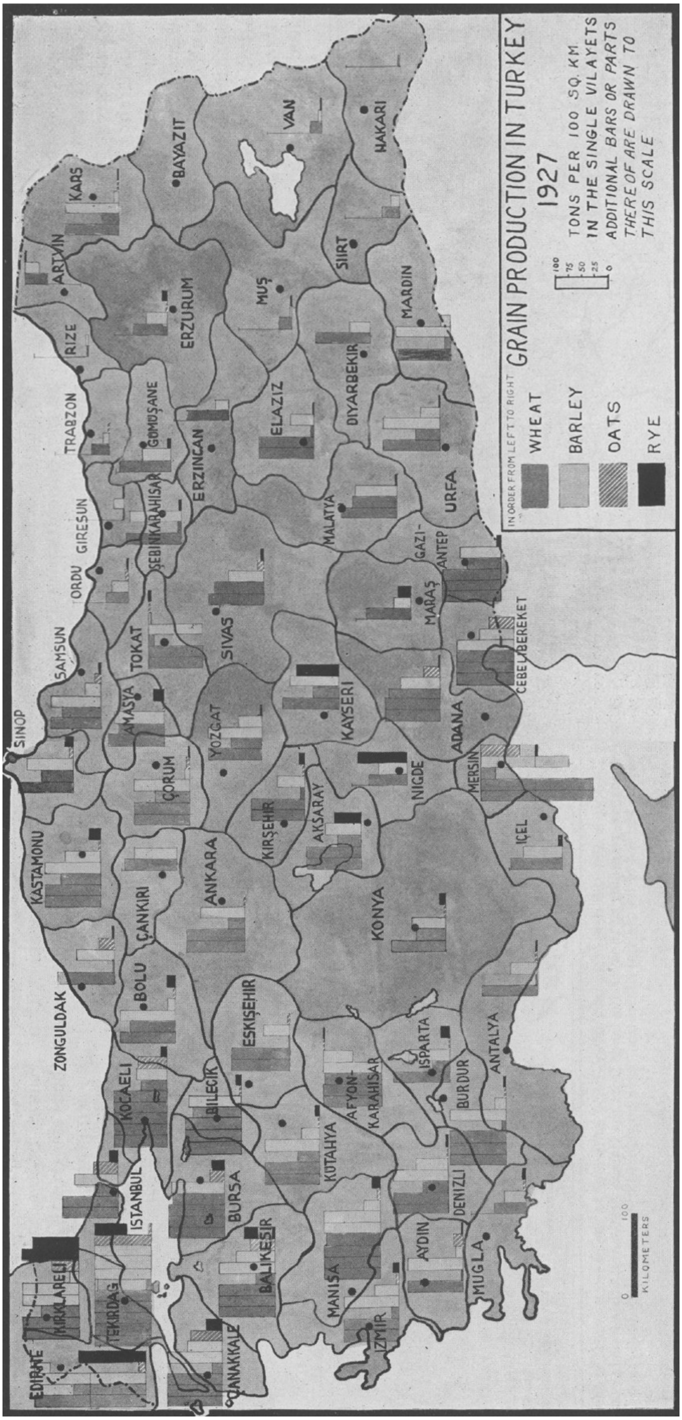

FIGURE 15.7 Cereal production figures as recorded by the 1927 agricultural census
AFTER STRATIL-SAUER 1933

Similarly, the high level of cereal production in the Black Sea Coastlands (particularly in its western parts) is not reflected by high densities of self-governing cities in the Roman period. Conversely, the low level of grain production in the Southern Coastlands seems at odds with the high densities of self-governing cities which can be observed during the first-to-third centuries CE.

As noted above, the relative dearth of self-governing cities in various parts of the Central Plateau can be explained as reflecting the existence of many large estates in these areas. In the case of the Southern Coastlands the large number of self-governing cities in Roman times can be accounted for by taking a closer look at conditions prevailing in the Ottoman period. In the sixteenth century only a handful of towns existed in this region.[50] Faroqhi attributes this to the spread of malaria in southern Anatolia, particularly in the coastal regions. The insalubrious conditions which existed in the early modern period are thought to have been caused by a decline of investment in maintaining dykes and controlling rivers, by the collapse of irrigation systems and by a failure to drain marshy lands.[51] Only after a large-scale anti-malaria scheme was launched in the first half of the twentieth century (after the 1927 census) could the Southern Coastlands be turned into highly productive areas.[52]

During the first centuries CE conditions for agricultural production in the Southern Coastlands appear to have been favourable. Strabo's description of Asia Minor contains only two references to the inhabitants of particular cities suffering from 'foul air' (probably meaning malaria). One of these cities is *Kaunos* in Caria; the other is *Mazaka Caesarea*.[53] Although absence of evidence does not mean evidence of absence, the high density of self-governing cities in the Southern Coastlands in Roman times strongly suggests that malaria did not prevent cities from flourishing in these areas in Antiquity.

6 Connectivity

Relationships between urban patterns and levels of connectivity are also worth exploring. A very important factor that belongs under this heading has already been discussed, namely proximity to the coast. Sea lanes offered fast and reli-

50 Faroqhi 1984.
51 Faroqhi 1990: 147–149.
52 World Health Organization (accessed June 2017)—http://www.euro.who.int/en/health-topics/communicable-diseases/vector-borne-and-parasitic-diseases/malaria/country-work/turkey.
53 Strabo 12.2.8; 14.2.3.

able lines of transport and communication, as opposed to more cost/effort/time-demanding transport over land. In this context it is worth noting that between 140 and 150 of the 428 located self-governing cities which existed in Early Imperial times were situated within less than 15km from the coast.[54] All the largest cities were located on or near the coast, with *Pergamon* being furthest away at some 24km from the coast. Of the 18 cities which can be assigned to the 80–160ha bracket, 12 are located further than 30km from the coast, with *Samosata*, *Taouion* and *Ancyra* being completely landlocked. Of the 31 medium-sized cities (40–80ha), 12 are located further than 30km from the coast. We can discern two patterns. On the one hand, there can be no doubt that the coastline was a major attractor for cities. At the same time landlocked cities situated in fertile regions could develop into sizable regional centres. The latter category comprises both medium-sized cities (e.g. *Adada*, *Pessinous*) and a smaller number of large cities (*Ancyra*, *Taouion*).

The surviving sources have little to say about river transport in Roman Asia Minor. However, ethnographic observations made in the mid-twentieth century refer to the use of goat-skin rafts carrying grain down the Euphrates in the area of the ancient *limes*, and for Antiquity raft transport can also be envisioned for other large rivers, such as the *Halys* and the *Maiandros*.[55] The riverine locations of *Samosata* and *Melitene* and their role in guarding the *limes* may explain the relatively large size of these cities.

Road transport is securely documented by large numbers of milestones and by surviving stretches of Roman roads all over Asia Minor.[56] Important roads also existed in pre-Roman times (e.g. the Royal Road), but the extensive Roman network of paved roads whose beginnings date back to the creation of the province of *Asia* in 129 BCE surpassed anything that had existed before. The roads were built primarily to facilitate military transport and communications between Roman administrators. It is therefore no coincidence that the earliest roads specifically target the central cities of the assize districts (*conventus*).[57] By the time of Hadrian these roads enveloped the entirety of Asia Minor.

54 Some 140 cities whose self-governing status is certain were situated on the coast or in close proximity to it. In addition, approximately 10 cities whose self-governing status remains uncertain were situated in the coastal districts.

55 Mitford 1974: 172.

56 Other sources include ancient itineraries and the *Tabula Peutingeriana*. Important work on the reconstruction of the Roman road network in Asia Minor has been carried out by David French. He conducted fieldwork from the 1970s up to 1995 and recently published the final volumes of his *Roman Roads and Milestones of Asia Minor* series. In this paper, I relied on a digitised version of this network, based on the *Barrington Atlas*, which in turn drew on work by French; French 1980: 700–704.

57 Mitchell 1999: 24.

FIGURE 15.8 The self-governing cities of Roman Asia Minor and the Roman road network

Once in existence, this road network was also used by merchants and travellers. An inscription found near modern Burdur contains an edict of the provincial governor, Sextus Sotidius Strabo, regulating the transport services the people of *Sagalassos* were obliged to provide to officials.[58] This confirms the administrative and fiscal functions of the Roman roads of this region. It seems a safe assumption, however, that once the local inhabitants had fulfilled their obligations (which could involve up to ten wagons per trip), they would have carried some goods and people back on the return journey. While the existence of so many well-kept roads must have facilitated exchange between cities, there are no grounds for thinking that the Roman road network instigated large-scale trade among cities separated by long distances.[59]

A possible exception is the transportation of animals and other food items from estates in Galatia, where few self-governing cities existed. These estates are particularly well attested around *Ouetissos* (a town whose self-governing status remains uncertain), *Ikonion* and *Laodikeia Katakekaumene*. Some of the owners of the estates are known to have originated in large cities in the Pamphylian plain. Examples include M. Plancius Varus of *Perge* (a senator under Claudius or Nero and *proconsul* of Bithynia under Vespasian), M. Calpurnius Rufus of *Attaleia* (senator under Claudius and *legatus Augusti pro praetore*) and Sextus Flaccus of *Attaleia* (an Augustan veteran colonist).[60] In Ottoman times large numbers of people from the areas to the west and south-west of Lake Tuz adopted a semi-nomadic lifestyle largely based on livestock rearing. In his study on pastoral lifestyles in Pamphylia and Pisidia, Xavier de Planhol noted that transhumance routes would go from the Pamphylian coastal plain all the way up to the Sultan Dağı Mountains, some 140–160 km from the Pamphylian coast.[61] The estates of Roman Galatia were situated further away, with *Ouetissos* being situated at a distance of some 250 km from the south coast. Nonetheless, it does not seem far-fetched to posit the existence of transhumant

58 Mitchell 1976: 109.

59 Despite its well-known flaws the ORBIS-website shows that landlocked cities like *Samosata*, *Melitene* and *Sebasteia* could not be reached from the Aegean cities within two weeks, the journey between these areas often taking as much as 20–30 days.

60 Estates of Plancius Varus are attested at modern Beyköy, situated in the north-west of Galatia, and at the colony of *Germe*, where an honorary inscription was dedicated to him; Mitchell 1993: 152; *IGR* III, 782; *IGR* III, 417; Mitchell 1974: 31–34. The family of Calpurnius Rufus probably had properties south of *Ikonion* and near *Laodikeia Katakekaumene*; Corsten 2005: 20; Mitchell 1993: 153; Halfmann 1979: 105–107 no. 10; *IGR* IV, 894; *SEG* XVII, 623. Sextus Flaccus of *Attaleia* owned property around Lykaonia and Cappadocia, south-west of Tuz Gölu; Mitchell 1993: 152; *SEG* XVII, 577–578.

61 de Planhol 1958: 190–222, Fig. 14.

pastoralists travelling between the Central Plateau and the Pamphylian plain in the Roman period as well. In any case the fact that owners of Galatian estates came from *Attaleia* and *Perge* points to the existence of economic connections between the landlocked districts of Roman Asia Minor and the coastal plains to the south.

7 Markets

So far it has been established that the agricultural potential and to some degree proximity to the coast shaped the pattern of self-governing cities. In addition, attention has been drawn to the role of the Roman road network in connecting these cities. While land-transport clearly played a role in exchange and communication between cities, large-scale exchange over long distances must have been hampered by the distances involved.

The question remains regarding the extent to which the pattern of self-governing cities constituted a market system capable of servicing a large proportion of the population of Roman Asia Minor. As De Ligt noted more than twenty-five years ago, in the case of the self-governing cities of the Roman Empire the pattern of marketing seems to have followed the pattern of elite residence rather than the other way around.[62] Dio Chrysostom noted the positive economic effects for the city of *Apamea* of the annual markets which coincided with the days the courts were held in this assize centre.[63] Strabo similarly records how periodic festivals attracted many people to *Komana Pontika*.[64] The *agorai* and market buildings which have been found in numerous self-governing cities likewise demonstrate that these settlements were (among other things) important nodes in local or regional market networks.[65]

To test whether the system of self-governing cities in Roman Asia Minor might have constituted a fully functional system of market centres, some concepts may be borrowed from Central Place Theory, which assumes that settlements are functional central places, providing services to the surrounding hinterland. The hypothetical 'ideal' model predicts a pattern with a hierarchical

62 De Ligt 1993: 191 n. 131.

63 Dio Chr. *Or.* 34.15–17.

64 Strabo 12.3.36. De Ligt 1993: 253–255 records the evidence for annual fairs held at five other cities in Roman Asia Minor: *Pergamon*: *IGR* IV, 352; *Kyzikos*: *SEG* IV, 707; *Amaseia*: Asterius *Hom.* 3.1; 4.1; *Aegae*: Theodoret *Ep.* 70; Theodosius, *De Situ Terrae Sanctae* c. 32; *Ephesos*: Theophanes 469.

65 Drexhage 2007: 63.

distribution of higher-order and lower-order settlements. Using this approach, John Bintliff has argued that the typical catchment radius for a market town was 2 to 3 hours' walking distance, corresponding to a distance of 10–15 km on a flat plain.[66] This means that the theoretical inter-centre distance between market towns in a fully functional system of market settlements is 20–30 km. Johannes Koder used the same method to study the patterning of market towns in the early Byzantine Empire. Unlike Bintliff, however, he considered a distance of 7–9 km from a non-market town settlement to the nearest market town as reasonable. On this basis he posited a distance of 13–15 km between market towns as indicative of the existence of a system of urban markets capable of servicing the entire rural population.[67]

In real life the patterns predicted by Central Place Theory cannot be expected to be found. Around the globe the uneven distribution of agricultural and other natural resources as well as the attraction exercised by locations which are well placed in terms of connectivity (e.g. locations on the coast or a well-travelled road) have been major factors in shaping settlement patterns. In addition, the simple fact that most landscapes are hilly and fragmented means that the starting assumptions of Central Place Theory cannot be fulfilled. Nonetheless, Central Place Theory remains a good starting point for an evaluation of the capacity of reconstructed settlement systems to operate as functional market systems.

As explained, the self-governing cities of Roman Western Anatolia were situated in relatively close proximity to each other, the average distance between these cities being 17.4 km, corresponding to 3–4 hours' walking distance. These figures are well below the maximum distance of 20–30 km between markets posited by Bintliff and also in line with Koder's lower figures. On this basis it seems highly likely that the self-governing centres of Western Anatolia were capable of servicing a large proportion of the rural population as market centres.

In the Southern Coastlands the self-governing cities were equally closely spaced, the average distance between neighbouring cities being 18.1 km, corresponding to 3–4 hours' walking. It should, however, be noted that there was a considerable amount of diversity in this region, with inter-city distances being larger in the eastern parts (towards Cilicia). Even in Pisidia, *Pamphylia et Lycia*, considerable variations can be observed. On the Lycian coast the self-governing cities were situated in close proximity to each other, but in Pisidia they were

66 Bintliff 2002: 218.

67 Koder 2006: 173–174.

separated by larger distances. In the Southern Coastlands as a whole, most self-governing centres were situated within 20 km of each other (n=102, from a total of 153 cities). In European Turkey the distances between self-governing cities are very large, the average inter-city distance being as high as 42.9 km, corresponding to at least 9 hours' walking. In this region less than half of all the self-governing cities were situated at distances less than 20 km (n=6, from a total of 14 cities). It follows from this that in most parts of south-eastern Thrace the self-governing cities cannot possibly have serviced the entire rural population of the surrounding districts.

The average distance separating the self-governing cities of the Central Plateau was 44.8 km, corresponding to at least 9 hours' walking. Here only 6 out of 48 cities were separated by distances falling short of 20 km. It is immediately clear that in this region the system of self-governing cities did not constitute a fully functional market system. The large gaps visible between *Taouion* and *Amaseia* and between *Parnassos* and *Sebasteia* reflect the harsh environmental conditions for agriculture and permanent human settlement that characterises these areas. However, in the absence of a large population of sedentary farmers, inhabitants with semi-nomadic lifestyles might have been highly mobile, thereby reducing the need for a dense cover of permanent or periodic markets in permanent settlements.

Finally, the self-governing cities of the Black Sea Coastlands were separated by a distance of 70.1 km (at least 14 hours' walking) on average. None of these cities was located within a distance of less than 20 km from its nearest neighbour. Again the conclusion that the cities of this region cannot have operated as a fully functional market system cannot be avoided.

If Central Place Theory is applied exclusively to the self-governing cities of Roman Asia Minor, we must conclude that only the urban networks of Western Anatolia and the Southern Coastlands were capable of operating as fully functional market systems. Interestingly, there are indications that even in these densely urbanised regions periodic markets were held in settlements that did not have self-governing status. One can think of *Korba*, a village with a monumental *agora*, which was situated at a distance of only 4.5 km from *Kyaneai*, a self-governing city.[68] Monumental *agorai* have been found in other villages as well, and some further cases are suspected.[69] An inscription from *Mandragoreis*, a village in the territory of *Magnesia* on the *Maiandros*, shows that short-cycle periodic markets were held in a village situated at a distance of

68 Geppert 2006: 72–73; Kolb 2008: 297–298.

69 E.g.: *Notion*: Bean 1966: 189; *Olosada*: Schuler 1998: 259; Bean and Mitford 1970: 135; *Almoura*: Schuler 1998: 259; *I.Ephesos* 3251; *Lagina*: Bean 1971: 98.

approximately 10 km from the city.[70] If this was the case in one of the most densely urbanised parts of Roman Asia Minor, the existence of subordinate villages in which periodic markets were held may also be posited for those areas where distances between cities were much larger. In Galatia and the eastern part of Phrygia rural populations might have visited 'domanial markets' held on privately owned estates, although conclusive evidence for this is lacking.[71]

The large distances which separated self-governing cities in most parts of Roman Asia Minor do not imply that large numbers of people living in these areas *never* visited urban markets. As De Ligt explained in his monograph on fairs and markets, the catchment area of markets depends on their frequency and duration and on the types of goods that are traded. In other words, annual fairs where a great variety of goods are offered for sale have a larger catchment area than high-frequency periodic markets.[72] In many parts of Roman Asia Minor local periodic markets, held once a year, might have attracted visitors from up to 50 km away. Viewed from this perspective, even the self-governing cities of the least urbanised regions of Asia Minor would have had 'catchment areas' which overlapped with those of neighbouring cities. Regional and interregional fairs would have had even larger catchment areas, but such fairs are recorded only in a few large harbour cities of Asia Minor, such as *Ephesos* and *Aegae*.

8 Conclusions

The pattern of self-governing cities in Imperial Asia Minor shows remarkable regional variations. The bulk of the cities were located in Western Anatolia and the Southern Coastlands, whereas the Central Plateau, the Black Sea Coastlands and European Turkey had few autonomous cities. This pattern broadly reflects the uneven distribution of good agricultural land, although some interesting exceptions can be identified. In addition, the coasts of the Mediterranean and the Black Sea clearly were important attractors for cities. Some large cities were to be found in landlocked regions, but these were usually situated in river valleys or in other areas with large tracts of good arable land. Most self-governing cities were connected by good roads or rivers. However, while

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70 Nollé 1982: no. 1; *SEG* XXXII, 1149; de Ligt 1993: 125.

71 Cf. the rural markets held in the Lydian village of *Tetrapyrgia*, which seem to have been situated on a private estate; de Ligt 1993: 160.

72 de Ligt 1993: 15.

there can be no doubt that rivers and roads facilitated commercial exchange between cities (and between cities and rural areas), there is no reliable evidence to suggest that they were used to trade large amounts of staple foods over long distances. The most important correlation between city density and connectivity manifested itself in western Asia Minor, where many self-governing cities were situated directly on the coast or at least in close proximity to it.

The self-governing cities of Western Anatolia and the Southern Coastlands were so closely spaced that they must have been capable of serving the entire rural population as outlets of agricultural produce and (to a lesser extent) as places where country dwellers could acquire manufactured items produced by urban craftsmen. Even in these densely urbanised areas we find evidence of markets being held in secondary agglomerations. *A fortiori* such markets must have been held in sparsely urbanised areas. However, because at least some parts of Roman Asia Minor, such as the Central Plateau and the Black Sea Coastlands, seem to have been sparsely inhabited, there is no need to posit the existence of large numbers of 'town-like' secondary settlements or periodic markets in these areas.

The author of this chapter does not claim that a full explanation of the spatial configuration of the self-governing cities of Roman Asia Minor can be achieved by looking at the geographical distribution of natural resources, connectivity and the role of cities as market centres. There can be no doubt, for instance, that the different histories of urbanism in particular regions played a very important part in shaping the urban patterns that can be reconstructed for the Roman period. It cannot be a coincidence, for instance, that those parts of Asia Minor where large numbers of Greek-type cities were founded in Archaic, Classical or Hellenistic times continued to be the most densely urbanised regions during the first three centuries CE. Neither can it be entirely coincidental that those parts of Asia Minor where few cities existed before the Roman conquest remained lightly urbanised during the early Empire. While some of these contrasts can be attributed to the operation of environmental or climatic factors, it cannot be denied that region-specific settlement patterns inherited from earlier periods were a major factor in shaping the urban systems of various parts of Roman Asia Minor.

Instead of trying to establish whether the quantitative properties of the urban system of Roman Asia Minor point to the existence of a well-integrated economy or to low levels of economic integration, it seems more productive to analyse the urban system(s) of this vast region as a complex system connected on multiple levels, with the strength of connections between cities and regions displaying huge variations. In general terms there can be no doubt that cities were connected to other cities, for example socially as a result of mar-

riages concluded between members of the elites of different cities, economically through commerce or as a result of the acquisition of properties in the territories of other cities, or culturally and religiously as a result of participation in the same athletic contests or religious festivals. The other side of the coin is that at this moment there is no clear evidence to suggest that economic interactions between the self-governing cities of Roman Asia Minor were sufficiently strong to create anything which might realistically be called a well-integrated urban hierarchy in which large amounts of goods were channeled from a large number of medium-sized or small cities to a small number of unusually large super-cities. In this sense the urban system of Roman Asia Minor is far removed from the fully integrated urban networks found in many parts of the contemporary world.

Appendix: Settlement Sizes

The aim of this appendix is to provide a brief presentation of the data on the sizes of (possibly) self-governing cities for Roman Asia Minor. The settlements are grouped by province. All sizes are given in hectares. References are kept as short as possible. A distinction is made between walled area (WA) and built-up area (BA). Many measurements have been carried out or checked using Google Earth (GE). In addition, the following abbreviations are used: McNic. = McNicoll 1997; Cl. = Classical; Hl. = Hellenistic; R = Roman Imperial; LR = Late Roman; Byz. = Byzantine; Med. = Medieval

Thracia

1. Adrianoupolis: WA 36 ha according to *TIB* 6: 165–166, based on dimensions of Byzantine city.
2. Ainos: BA 100 ha in GE max., using the village of Enez, necropoleis and archaeological traces as indicators, with a wide margin of error (cf. Başaran et al. 2016: 430).
3. Perinthos: WA & BA 61 ha in GE, based on Sayar (1998: Karte 1). Necropoleis begin immediately outside the walls; 'wonderful city' according to *Expositio* E. XL; Diod. Sic. 16.74–76 reports that houses were tightly packed and tall.

Bithynia et Pontus

4. Amastris: BA 60 ha in GE max. cf. Marek (1993: 91), including two islands, harbour and market building as S limit and theatre as W limit and excluding overgrown hill of military base.

5. Byzantion: WA 150 ha for pre-R walls according to Russell (1958: 66); post-Severan walls 170 ha in GE, cf. Bassett (2004: 21); BA of pre-Severan city 70 ha according to Müller-Wiener (1977: 18); 'large and wonderful city' according to *Expositio* E. XL.
6. Herakleia Pontika: WA 42 ha Cl. walls; cf. Hoepfner (1966: 21); BA 80 ha in 2nd c. CE according to Hoepfner (1966: 40 & plan II) and id. (1972: 39); unclear whether entirely built-up.
7. Nikaia: WA 137 ha in GE cf. Bekker-Nielsen (2008: 49 Fig. 8); Strabo 12.4.7 describes the city as quadrangular and as 16 stadia in circuit; 'large and wonderful city' according to *Expositio* E. XLIX.
8. Nikomedeia: WA 184 ha in GE following Diocletian walls, which enclosed a larger area than the Hl. walls and the R. city proper. cf. Bekker-Nielsen (2008: 52 Fig. 11); Foss (1996: 29, 42); 'large and wonderful city' according to *Expositio* E. XLIX.
9. Pompeiopolis: BA 16 ha cf. Berghausen et al. (2009: 44).
10. Sinope: WA 27 ha in GE cf. Barat (2012: 44–49). BA 84 ha in GE max., R. town extended extramurally, as evidenced by public buildings, up to 500 m E of the wall, using these plus a wide margin; Doonan (2004: 98); Strabo 12.3.11—extramural suburbs.
11. Tieion: BA 37 ha in GE cf. Atasoy and Yildirim (2015), using acropolis N, aqueducts, *nymphaeum* and tile factory S and Th. plus necropoleis E and coast as W limits.

Asia

12. Adramyttion: BA 43 ha, cf. archaeological remains of settlement in GE (plan in Özgen 2013: 187; 2014: 13).
13. Aegae: WA 17.5 ha cf. Pirson (2004: 208); 12 ha in GE cf. Bohn (1889: Abb. 3).
14. Aizanoi: BA 133 ha in GE demarcated by tombs cf. Rheidt (1993: Abb. 1); however, urban core of 2nd half 2nd c. CE is 49 ha in GE cf. Rheidt (1993: Abb. 26), measures roughly 49 ha in GE max.; possibly only 25 ha residential area plus public buildings.
15. Akmoneia: BA 19 ha in GE, focusing on the scant remains on top of the settlement hill, worked fields surrounded with hedges as the flat area on top of the hill; *TIB* 7: 176; *MAMA* VI, XVII; entire hill c. 56 ha, but no arch. remains attested here.
16. Alabanda: WA 81 ha in GE cf. McNic. (: 35); necropoleis outside the walls.
17. Alexandreia Troas: WA 405 ha, including the port and stadium cf. Ricl (1997: 1); inner enclosure 250 ha in GE cf. Schwertheim (2006: 12 Abb. 1). BA 125 ha, the urban core, where most of the monuments are situated with a large margin of error measured c. 90 ha in GE. Strabo 13.1.26 notes

it as one of the notable cities, but also notes that Pergamon (190 ha) was the largest in NW Asia Minor. Given the fact that other large cities in the region are in the 100–150 ha range, a tentative figure for BA size of 125 ha is used.

18. Alinda: WA 14 ha in GE cf. McNic. (: 27). BA 14 ha extrapolated cf. Hansen (2006: 42 Tab. 2.1).
19. Amorion: WA 60 ha in GE incl. lower city wall; 5 ha for central hill.
20. Ankyra: BA 16 ha in GE for the settlement hill.
21. Antiocheia on the Maiandros: BA Smith & Ratté (1996: 21–24) note Byz. fortifications (c. 12–15 ha in GE) while the entire hill is c. 51 ha. Yet the Hl. & R. city focussed on the N slopes of the hill only and the Maeander plain, as R. remains are non-existent on the hill; The area of the N slopes near St. and part of the Maeander plain does not exceed 30 ha and given the fact that Strabo 13.4.15 also notes its moderate size, a safe assumed max. size of 40 ha seems reasonable.
22. Apameia Kibotos: BA 37 ha in GE max. for the settlement hill cf. *TIB* 7: 188–189, probably smaller as the slopes are steep; Strabo 12.6.4; 8.13.15 notes it as one of two largest cities of Phrygia and notes its suburbs.
23. Aphrodisias: WA 80 ha LR. wall (de Staebler 2008: 289), which was built around the R. city, without large empty spaces; existence of necropoleis outside the wall suggest max. size; Ratté (2001: 125–126); 66.5 ha cf. *TIB* 8: 191.
24. Apollonia ad Rhyndacum: BA 9 ha in GE for the outermost tip of the peninsula, 43 ha for the two outermost expansions of the peninsula, but c. 20 ha built-up, cf. Le Bas and Reinach 1888: 39, Taf. 47.
25. Apollonis: WA 50 ha in GE using Hl. fortifications.
26. Assos: WA 50 ha in GE, mid 4th c. BCE fortifications; Arslan and Rheidt (2013: 197, 200).
27. Bargylia: WA & BA 24 ha in GE cf. Bean (1971: 86), using hill, church, causeway S, necropoleis N and remains of walls E.
28. Blaundos: BA 16.5 ha in GE for the 1st–2nd c. CE occupation cf. Filges (2011: 143, Fig. 5).
29. Colossae: BA 7.7 ha in GE for the hill cf. *TIB* 7: 310; 15 ha in GE up to the necropolis present N bank of the Lykos river; Bean (1985a: 270).
30. Dorylaion: BA 16 ha in GE for the settlement hill, inner core 6 ha; *TIB* 7: 241; von Aulock (1987: 19) estimates the hill as similar in size to Gordion.
31. Elaea: WA 48 ha in GE Hl. walls cf. Pirson and Zimmerman (2012: 62–64); 46 ha cf. Pirson (2004: 208), possibly not entirely occupied.
32. Ephesos: WA 386.5 ha cf. Groh (2006: 101) BA 185 ha for R. grid of which 108 ha residential, 34 ha harbour and residential and 43 ha public/civic

buildings; Dio Chrys. *Or.* 40.11—urban growth in late 1st c. CE; large city with special harbour according to *Expositio* E. XLVII.

33. Eresos: WA 5 ha for Cl.; Hansen (2006: 114).
34. Erythrai: WA 127 ha in GE cf. McNic. (: 65); BA 71 ha extrapolated cf. Hansen (2006: 42 Tab 2.1).
35. Europos: WA 33 ha in GE, wall visible.
36. Gargara: BA 40 ha extrapolated: Cook (1973: 256–257) describes Gargara as a major and sprawling site, yet there are no indications that this site was larger than 40 ha, compared to other cities in the area (Assos WA: 50 ha).
37. Halikarnassos: WA 152 ha in GE, cf. Bean and Cook (1955); Schröder and Seifert (2007: 102) for larger estimate BA 100 ha cf. Hansen (2006: 62), which is based on pers. comm. with Poul Pederson; 84 ha in GE using Pederson's reconstructed grid, as published on the SDU Halikarnassos excavation website.
38. Herakleia pros Latmos: WA 48 ha in GE for the lower town cf. Peschlow-Bindokat (1996: 25 Fig. 23), BA 22 ha in GE, based on the grid plan, public buildings etc.
39. Hierapolis: WA 57 ha in GE cf. Bean (1971: 239), extramural remains BA 80 ha cf. d'Andria (2001: 99); Arthur (2012: 275).
40. Hypaipa: BA 32 ha in GE cf. Altınoluk (2013: 252), using acropolis NE and necropolis as SW limits.
41. Iasos: WA over 28 ha, with massive defenses on hill-crest on the mainland; McNic. (109–110) BA 28 ha in GE for peninsula with all public buildings cf. Bean (1985b: 71–84); inland expansion is possible, given the massive defensive works there.
42. Ilion: WA & BA 72 ha for Hl. wall and enclosing the grid; Rose (2014: 180); grid reached its max. filling during the 3rd c. CE; Rose (2014: 245–246).
43. Kaunos: WA 150 ha cf. Schröder and Seifert (2007: 102) after Öğün and Işık (2003), BA 39 ha in GE, following locations of necropoleis and observations by Schmaltz (1994: 185).
44. Keramos: WA 19 ha in GE, although the presence of R. sarcophagi outside the wall may indicate the R. city was larger than the Hl. wall circuit; McNic. (: 160–164).
45. Kibyra: BA 32 ha in GE max. for HL. & R. Kibyra, using visible public buildings and tombs N, W, E, while the slope of the valley S as limits, cf. Bean (1978: 163).
46. Klazomenai: BA 32 ha in GE for the island cf. Bean (1985b: 133); in Hl. & R. habitation limited to the island, in Cl. period the city expanded on the mainland as well, totaling some 74 ha; Ersoy and Koparal (2012: 25–27).

47. Knidos: WA 70 ha Cl. walls cf. Hoepfner (1966: 21), BA 42 ha in GE, using topography, theatre N, reconstructed streets and peninsula S as limits; Schröder and Leifert (2007: 96).
48. Kolophon: WA 66 ha max. in GE for Hl. walls incl. acropolis; the larger 'land-walls' enclose 130 ha in GE (McNic.: 69), BA 38 ha extrapolated cf. Hansen (2006: 42 Tab. 2.1, 57% of WA); walls pre-date the Hellenistic forced migration (299 BCE) and in all likelihood only a small reoccupation took place during the third century. Fortifications enclose an area many times larger than the R. city.
49. Kyme: WA 25 ha in GE max. Cf. Bean (1966: 104), using river N, main hill and walls S as limits.
50. Kyzikos: WA 158 ha in GE cf. Rustafjaell (1902: Pl. XI) and McEvedy (2011: 139); Strabo 12.8.11 states that Kyzikos rivalled the foremost cities of Asia in size, beauty and administration and notes a suburb; *Expositio* E. XLVIII praises the city for its size, situation, beauty and furnishings.
51. Laodicea ad Lycum: BA entire hill c. 154 ha in GE, but using plan c. 93 ha in GE cf. Şimşek (2011: 336); city's activities extended beyond this area, since the northern necropolis was also the location of a painting workshop; R. city had grown significantly; Traversari (2000: 19–20); Strabo 12.8.16; 'a very large city' according to *Expositio* E. XLII.
52. Lebedos: BA 20 ha in GE cf. Bean (1966: 152–153), using acropolis and the peninsula as limits.
53. Magnesia on the Maiandros: WA 140 ha in GE using Hl. walls and river; Bean (1966: 250), BA 86 ha in GE max. using stadium and theatre as S-SW border, since most finds concentrate in the NE part of the site.
54. Methymna: WA 30 ha for Cl.; Hansen (2006: 114).
55. Metropolis: WA 10 ha in GE for Hl. Walls; BA 20 ha, cf. Hill (2016: 216) for R. city, which expanded beyond the Hl. Walls during the mid-2nd c. BCE.
56. Midaion: BA 7.6 ha in GE for the plateau of the settlement hill cf. Humann and Puchstein (1890: 23); (robber?) trenches visible in GE (2002) E of hill and perhaps the city extended in this direction.
57. Miletos: WA 90 ha in GE, excl. walled area of Kalabak Tepe; 110 ha cf. Müller-Wiener (1986: 98); Hoepfner (1966: 21).
58. Mylasa: BA 78 ha in GE max. cf. Bean (1985a: 40), using wide margins and the temple of Zeus Karios, Baltali Kapi gate, the street plan and the necropoleis as limits.
59. Myndos: WA 77 ha in GE Hl. cf. McNic.: 24 BA 44 ha extrapolated as the WA is known to have not been filled cf. Diog. Laert. 6.57; figure cf. Hansen (2006: 42, Tab. 2.1).

60. Myrina: BA 60 ha in GE cf. Bean (1966: 109), taking the two hills, river, coast and necropolis as demarcators.
61. Mytilene: WA 140 ha for Cl.; Hansen (2006: 114).
62. Nysa: WA 54 ha in GE cf. Bean (1985a: 225, Abb. 35), using walls and natural landscape.
63. Orthosia: WA 50 ha in GE cf. Debord (1998: 259).
64. Parion: WA 114 ha in GE cf. Keleş (2015: 30).
65. Pergamon: WA 18 ha for Cl.; Hansen (2006: 115); 90 ha for Hl.; BA 230 ha, cf. Wulf 1994, but this reconstruction has recently been questioned, cf. Pirson (2008: 120; 2011: 138–140 and n. 122); latest estimate to be published by F. Pirson is 190 ha cf. Pergamon Paper presented at RAC/TRAC 2016 in Rome.
66. Perperene: WA 12 ha, sarcophagi found extramural; Bohn and Fabricius (1886: Taf. 1).
67. Pessinous: BA 45 ha in GE cf. Verlinde (2010: 112).
68. Philadelphia: WA 135 ha Byz. walls cf. Meriç (1986: 263).
69. Phokaia: BA 52 ha in GE max. Using theatre, temple of Athena and necropolis S as markers cf. Özyigit (1993).
70. Pitane: BA 37 ha in GE max. cf. Bean (1966: 117), following necropolis N, and spread of antiquities.
71. Priene: WA 43 ha in GE excl. acropolis cf. Ruppe (2007: 278); Raeck (2003: 322); 76.6 ha in GE incl. acropolis (cf. McNic.: 50), BA 23 ha in GE using S city wall, the grid and sanctuary of Demeter in the N as limits; Schröder and Seifert (2007: 102) state that the 'Wohnstadt' measured 12–15 ha.
72. Prusa: WA 40 ha in GE for the acropolis cf. Bekker-Nielsen (2008: 53, Fig. 12).
73. Prymnessos: BA 7 ha in GE for the settlement hill, using the ring road as limit and incl. campus area.
74. Samos: WA 103 ha for Cl.; Hansen (2006: 115).
75. Sardis: WA 156 ha in GE using LR. wall, incl. slopes and acropolis with no evidence for occupation; Hanfmann & Waldbaum (1975: 37); Rautman (2011: 3); 125 ha in GE excl. mountain slopes and acropolis, incl. R. villa and bathhouse of Pactolus North sector.
76. Skepsis: BA 28 ha in GE max. for the main settlement hill, using wide margins cf. Cook (1973: 345).
77. Smyrna: WA 193 ha; Thompson and Wilson (2016: 276 n. 32): 186 ha; cf. McEvedy (2011: 354); Akurgal (1993: 50); Dio Chrys. *Or.* 40.11—urban growth in late 1st c. CE; alludes to the growth of Smyrna in late first c. CE; Arist. *Or.* 19.11; 'large and wonderful city' according to *Expositio* E. XLVII.
78. Stratonikeia: WA 93 ha in GE cf. Söğüt (2009).

79. Tabai: BA 16 ha in GE for the settlement hill.
80. Teos: WA 71 ha in GE lCl.-Hl. walls cf. McNic. (157–160).
81. Tralles: WA 140 ha cf. Aperghis (2004: 47); in GE 172 ha, measuring plateau and necropoleis as limits.
82. Tripolis on the Maiandros: WA 70 ha in GE cf. Duman and Baysal (2014: 645), using walls and necropoleis N & E, river S and the stadium in the W as limits.

Galatia et Cappadocia

83. Amaseia: WA 28.5 ha, acropolis 3.5 ha, BA 12 ha for the lower town; McEvedy (2011: 15–16).
84. Ancyra: BA 113 ha max. in GE cf. Bennett (2003: 6), Caracalla Baths N, Genclik Park and ancient theatre as markers, hills E as limits; 'a very large city' according to *Expositio* E. XLI.
85. Antiocheia pros Pisidiam: WA & BA 46.5 ha cf. Levick (1967: 93); walls LR. period and enclose the R. city with no evidence for extramural housing; Mitchell and Waelkens (1998: 91).
86. Apollonia Mordiaion: WA 8.7 ha in GE for the acropolis and walls.
87. Derbe: BA 3.6 ha in GE for the plateau of the settlement hill (13 ha total), where all arch. remains are attested; Ballance (1957: 151).
88. Eupatoria—Magnopolis: BA 5.3 ha in GE for the plateau of hill where arch. remains are reported cf. Olshausen and Biller (1984: 39–40).
89. Ikonion: WA 19th-century descriptions note the circumference of the Seljuk walls at between two-three miles (Leake 1824: 48–49) The older Greek walls, apparently traceable in the 19th century, ran at some distance from the modern town, near the suburb of Meram (Percy 1901: 26–27). To judge from these clues, the ancient walled area might have been about the same size as the Seljuk-period enceinte (130 ha).
90. Lystra: BA 6.5+ ha for the settlement hill/acropolis, town extended beyond the tepe; Levick (1967: 51–52).
91. Melitene: WA & BA 49.6 ha in GE cf. Mitford (1980: 1221 Fig. 10), eByz. walls, which follow the legionary camp; *TIB*2: 236; Procop. *Aed.* 3.4.18—city grew beyond its original fortifications and Emperor Anastasius walled the city again.
92. Neoklaudiopolis: BA 52 ha cf. Bekker-Nielsen (2013: 207), based on two necropoleis and location arch. remains.
93. Soatra: BA 18 ha in GE, using the hill and visible remains E of hill.
94. Taouion: BA 150 ha claimed by Strobel & Gerber (2000: 237) based on surface remains and locations of necropoleis. Yet own measurements in GE, based on the maps produced by Strobel & Gerber, reveal a maximum size

of some 95 ha; R. city later enclosed by Byz. Walls, which enclose some 52.3 ha.

95. Trapezous: WA 23 ha in GE for Hl. to Med. walls cf. Lynch (1901: 13).

Pisidia, Lycia et Pamphylia

96. Adada: BA 42 ha in GE max. cf. Brandt (2002: 391), using S. necropolis, hillsides and location of public buildings as indicators.
97. Antiphellos: BA 17 ha in GE following theatre, seawalls and necropoleis cf. Bean (1978: 93); Zimmermann (2005: 246).
98. Aperlai: WA 5 ha for fortified acropolis cf. Bean (1978: 101–103).
99. Araxa: BA 5.5 ha in GE, using Lycian tombs as limits.
100. Ariassos: WA 12+ ha; Aydal et al. (1997: 160); *TIB*8: 191, 450.
101. Arneai: WA 2.5 ha in GE; 3.8 ha in *TIB*8: 192.
102. Arykanda: BA 10.5 ha urban core Hl. & R. city; 33.3 ha in GE for city up to necropoleis cf. Knoblauch and Witschel (1993: Plan 1); Bayburtluoğlu (2003: 50–51); Hl. city expanded to lower terrace in R. times; Yaman (pers. comm. 2016).
103. Aspendos: BA 45 ha in GE max. using the hill plus extramural buildings with a wide margin cf. Kessener and Piras (1998: 151); Bean (1968: 73); but as the city gates and spectacle buildings are concentrated on the hill, this is considered the core of the settlement, some 30 ha.
104. Attaleia: WA 83 ha in GE cf. Lanckoronski (1890: 8 Fig. 4), see also Brandt and Kolb (2005); 60 ha cf. Grainger (2009: 234); 30.5 ha cf. *TIB*8: 193.
105. Balboura: WA 8.6 ha Hl. wall of which 5.6 ha residential area cf. Coulton (2012a: 67, 76), BA 11.6 ha max., incl. Asar Tepe as completely inhabited and Flavian expansion. Extra residential area of 2.5–3 ha cf. Coulton (2012a: 125).
106. Boubon: BA 17.4 ha cf. Kokkinia (2008); Hülden (2008: 150).
107. Choma: BA 7 ha in GE, hill plus margin cf. Bean (1978: 156), who notes possible city blocks W of the hill. GE photo (20-10-2014), reveals outline apsidal building to the SW of the mound.
108. Etenna: BA 11 ha min. cf. *TIB*8: 191, 531–532 for the top of the settlement hill, although ruins spread on its slopes as well.
109. Hadrianopolis: BA 30 ha in GE cf. *TIB*8: 420.
110. Isinda: WA 50 ha max. cf. French (1994: 57), scant remains, with only a Roman arch found some 600 m from the acropolis in an orchard.
111. Kadyanda: WA 90 ha in GE cf. Borchhardt and Bleibtreu (2013: Tafel 267, 1); McNic. (: 134) even smaller area BA 60 ha extrapolated as only some 2/3 intramural was built-up and cf. Hansen (2006: 42 Tab. 2.1). Kolb (pers. comm.) suggests c. 20 ha.

112. Kandyba: BA acropolis 2.8 ha in GE cf. Bean (1978: 108); 1.4 ha cf. *TIB*8: 192; Zimmermann (1992: 60).
113. Kolybrassos: BA 5.7 ha in GE cf. Bean and Mitford (1965: 9), using visible remains and necropoleis as limits.
114. Komama: BA 14.2 ha cf. Levick (1967: 51).
115. Kremna: WA 38.2 ha cf. *TIB*8: 193; 36.2 ha cf. Levick (1967: 46).
116. Kyaneai: WA 4–5 ha Hl. in GE cf. Tietz (2010: 2, 16, 23); 3.7 ha cf. Kolb (2008: 169), BA 5 ha in GE, 8 ha incl. theatre area.
117. Laertes: BA 7.4 ha in GE using visible remains.
118. Limyra: WA & BA 22 ha in GE cf. Seyer (2012), using necropoleis, walls N and lower city.
119. Lyrbe: WA 41.8 ha cf. *TIB*8: 193, but 'keine Vollbesiedlung' BA ibid.
120. Lysinia: BA 2.2 ha in GE for the narrow crest where the ruins are located cf. Bean (1959: 78).
121. Malos: WA & BA 9.6 ha in GE cf. Mersich (1985: 52–53), rocky 'Kale' of c. 120 m wide with ancient towers and 800 m westward other ancient tower defences are located.
122. Melli: WA 6 ha in GE for Hl. perimeter cf. Vandeput et al. (1999: 138); Vandeput and Köse (2001: 134, Fig. 1).
123. Myra: BA Strabo 14.3.3—among the largest cities of Lycia, which all range 12–20 ha excl. Telmessos at 37 ha. A safe extrapolated max. size of 40 ha seems reasonable.
124. Oinoanda: BA max. 14 ha in GE, as ruins do not extend outside this area and the area is not fully built-up; Brandt and Kolb (2005, Abb. 37).
125. Olbasa: BA 36.4 ha cf. Levick (1967: 49 n. 1); Brandt (1992: 116).
126. Olympos: BA 13 ha in GE using the necropoleis as limits; 9 ha cf. Olcay Uçkan (2007); 9 ha cf. *TIB*8:192; Strabo 14.3.3—among the largest cities of Lycia.
127. Panemoteichos: WA 0.7 ha for 2nd Hl. settlement cf. Aydal et al. (1997: 160), BA over 10 ha cf. *TIB*8: 775–776, R. settlement expanded outside acropolis and measured 600 m N-S by 350 E-W.
128. Patara: WA 53 ha in GE Cl./Hl. walls cf. Bruer and Kunze (2010: 21, 24), BA 37 ha in GE, using R. buildings and tombs as indicators; Strabo 14.3.3; 6—among the largest cities of Lycia.
129. Pednelissos: WA 12 ha in GE cf. McNic. (: 132), excl. mountain slope, 18 ha incl. slope.
130. Perge: WA 63 ha in GE incl. theatre and stadium, 57 ha excl. cf *TIB*8: 193; 38 ha cf. Schütte-Maischatz and Winter (2004: 8); 15 ha acropolis and 49 ha total cf. Grainger (2009: 29, 234); 'a wonderful city' according to *Expositio* E. XLV.

131. Phaselis: WA 18 ha for main settlement in GE plus 0.65 ha for the northern settlement; Schäfer (1981: 38, 130); 26–30 ha with reduction to 11 ha in Late Antiquity cf. Grainger (2009: 215); *TIB*8: 191.
132. Phellos: BA 14 ha in GE cf. Zimmermann (2005: 222, 240); 2.8 ha cf. *TIB*8: 192.
133. Pinara: WA 29 ha in GE cf. Wurster and Wörrle (1978: Abb. 6, 16 & 22); *TIB*8: 191. BA 12 ha in GE cf. Wurster & Wörrle (1978: 99, Abb. 6, 16, 21–23); theatre located outside the city and 1 ha on acropolis; Strabo 14.3.3—among the largest cities of Lycia.
134. Pogla: WA 1.5 ha for acropolis; Bean (1960: 56), BA buildings and R. pottery scatters found outside acropolis as well.
135. Prostanna: WA 1.91 ha in GE cf. Ballance (1959: 126–127), BA 7 ha in GE, following remains across saddle of the hill.
136. Rhodiapolis: BA 11 ha in GE, using necropoleis as limits cf. Çevik et al. (2010: Fig. 1); Çevik et al. (2010: 31 notes): 26 ha, 4 ha for the centre.
137. Sagalassos: BA 37.5 ha within the necropoleis, of which 25.22 ha residential zone; Sag. Arch. Project; Martens et al. (2008: 137).
138. Seleukeia Sidera: BA 30 ha, measurement of the acropolis hill, but city may have expanded S cf. *RE* II A 1 (1921): 1204–1205 (Ruge).
139. Selge: WA 18 ha in GE for the LR. wall, cf. Machatschek (1977: 179–181), BA 28 ha in GE, incl. theatre, lower agora and necropoleis as limits; *TIB*8: 836; of this, 12 ha residential zone cf. Machatschek and Schwarz (1981: 118).
140. Side: WA & BA 48 ha in GE; 45–55 ha cf. Schütte-Maischatz (2004: 8); Grainger (2009: 30); *TIB*8: 193; McEvedy (2011: 340); 'a wonderful city' according to *Expositio* E. XLV.
141. Sidyma: BA 30 ha in GE, using tombs and ruins as demarcators cf. Bean (1978: 78–81).
142. Sillyon: BA 27 ha in GE, incl. stadium cf. Bean (1968: 61); Grainger (2009: 29, 234); *TIB*8: 191.
143. Telmessos: BA 67 ha in GE cf. Bean (1978: 38–41), using theatre, rock-cut tombs, coast and modern streets as limits.
144. Termessos: BA 18 ha in GE using tombs and valley in the west as limits cf. Bean (1968: 127).
145. Tlos: BA 14 ha in GE using visible remains and tombs as limits; *TIB*8: 192 claims 3.6 ha; Strabo 14.3.3—among the largest cities of Lycia.
146. Xanthos: WA 33 ha in GE cf. Bean (1978: 54); 30 ha cf. Des Courtils and Cavalier (2001: 149); Strabo 14.3.3; 6—among the largest cities of Lycia.

Cilicia

147. Anazarbos: WA 100 ha Arabic city walls which enclose the R. city; Posamentir and Sayar (2006: 318); Hellenkemper (1990: 75). BA: small place in Hl. period, c. 30 ha cf distribution ceramics in Posamentir (2011: 103); 123 ha in GE total, using the walled area and the N extramural area, where a grid of R. date was found; Posamentir and Sayar (2006: 343).
148. Anemurium: BA 25 ha in GE, cf. Hild, 'Anemurion', *DNP*; Russell, 'Anemurium', *PECS*; using upper and lower city, fortification and seawall, aqueducts and visible remains as demarcators.
149. Antiochia ad Cragum: BA 24 ha based on pottery distributions collected by ext. survey cf. Blanton (2000: 54); Rauh et al. (2009: 288).
150. Aphrodisias: BA 15 ha cf. *TIB*5: 194.
151. Diocaesarea: WA 24 ha in GE following walls and monuments cf. map in *MAMA* III: Taf. 30.
152. Elaioussa: BA 23 ha max., including necropoleis; Borgia (2007).
153. Ilistra: BA 3 ha in GE for the settlement hill; although the town possibly extended further, this was certainly a very small town; *TIB*4: 179.
154. Iotape: BA 10.4 ha for R. & LR. town, grown from c. 4.5 ha during Hl.; Blanton (2000: 24).
155. Issos: BA 3.3 ha settlement hill cf. Archaeological project by Bilkent University (http://arkeo.bilkent.edu.tr/kineteng.html—20th of May 2016).
156. Iuliosebaste: BA 3.7 ha; Rauh et al. (2009: 288); Hoff (2013: 145).
157. Kastabala: WA & BA 23 ha in GE, incl. acropolis, cf. Bent (1890); necropoleis outside the ramparts; Gough, 'Hierapolis Castabala', *DNP*.
158. Kelenderis: BA 8.5 ha in GE cf. Zoroğlu (1991: 247), incl. harbour and ancient remains.
159. Kestros: BA 2.9 ha cf. Rauh et al. (2009: 288); Blanton (2000: 76–77).
160. Korakesion: WA 39 ha in GE post-Roman city walls, which contain remains of the Hl. circuit, cf. Bean (1968: 104); 30–42 ha cf. Grainger (2009: 234); 32.8 ha cf. *TIB*8: 193, 589.
161. Magarsos: WA 126 ha in GE cf. Erhan and Gülşen (2015: 186); Rosenbauer (2007: 110).
162. Nephelis: BA 1.8 ha cf. Rauh et al. (2009: 288); earlier studies suggest a size larger than Kestros and Iotape; possibly as large as 15 ha; Karamut and Russell (1999: 364); Blanton (2000: 76–77).
163. Seleukeia Tracheia: WA 98 ha incl. Acropolis; BA 84 ha in GE excl. acropolis cf. plan in *MAMA* III: Taf. 3, using the necropoleis S and stadion E, river N and acropolis W as limits.
164. Selinous: BA 24 ha in GE cf. Rauh et al. (2009: 287), although they claim 41.4 ha; Blanton (2000: 33) notes the city grew from Hl. 2.4 ha, to 10.85 ha early R., finally to 23.38 ha R.

165. Soloi-Pompeiopolis: WA 54 ha in GE excl. harbour, cf. Beaufort (1817: 240).
166. Syedra: BA 7.2 ha cf. *TIB*8: 867, city-hill had a mid-Imperial size of 450 m E-W; 150 m on the S terraces.
167. Tarsos: WA 73 ha cf. *TIB*8: 191; Dio Chrys. *Or.* 40.11 alludes to the growth of Tarsos; 'a large and good city' according to *Expositio* E. XXXIX.

Syria

168. Samosata: WA 80 ha for the R. town cf. Pollard (2000: 267).
169. Doliche: BA 72 ha based on survey cf. Schütte-Maischatz and Winter (2004: 7–8), may have been densely settled.

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CHAPTER 16

From Mountain to Coastal Plain: Settings of Settlements and Stages of Urbanisation in Ancient Lycia

Frank Kolb

1 Introduction

Within the ancient world in general and Anatolia in particular, Lycia certainly belongs to the regions in which ancient settlements are unusually well preserved (Fig. 16.1). Except for Bronze Age settlement structures in the Northern Highlands, the documentary evidence starts around 600 BCE.[1] The development of settlements and urbanisation can be divided into three chronological stages: a first phase from about 600 to 360 BCE, when Lycia was part of a satrapy in the Achaemenid Persian Empire; a second phase with the introduction and development of the Greek polis system; a third phase with the integration of Lycia into the provincial system of the Roman Empire in 43 CE.

During these phases the structure, types and hierarchy of settlements underwent considerable changes. These changes also concerned the types, numbers and character of central places, which are difficult to differentiate according to modern categories like city, town and village, not to speak of the intrinsic meaning of 'urban'. It seems that in the Lycian language the word *wedri* designated a central place, since it is used to characterise settlements like *Phellos*, *Pinara*, *Xanthos* and *Tlos*. The Lycian name for *Rhodiapolis* is *wedrêi*, and the local goddess *Malija wedrênni* corrsponds to *Athena Polias* in Greek inscriptions. Apparently, *wedri* was the equivalent to *polis*.[2] This does not help us with regard to modern terminology and definitions. As basic prerequisites of a central place I would include: the topographic and administrative unity of the settlement; a population sufficient for a division of labour and social stratification required to serve central-place functions for a certain territory or region; and an architectural diversity resulting from these functions. The variety of the building substance, and in particular its urban quality, will depend on the character

1 Becks 2016: 26–36.
2 Neumann and Tischler 2007: 421–422.

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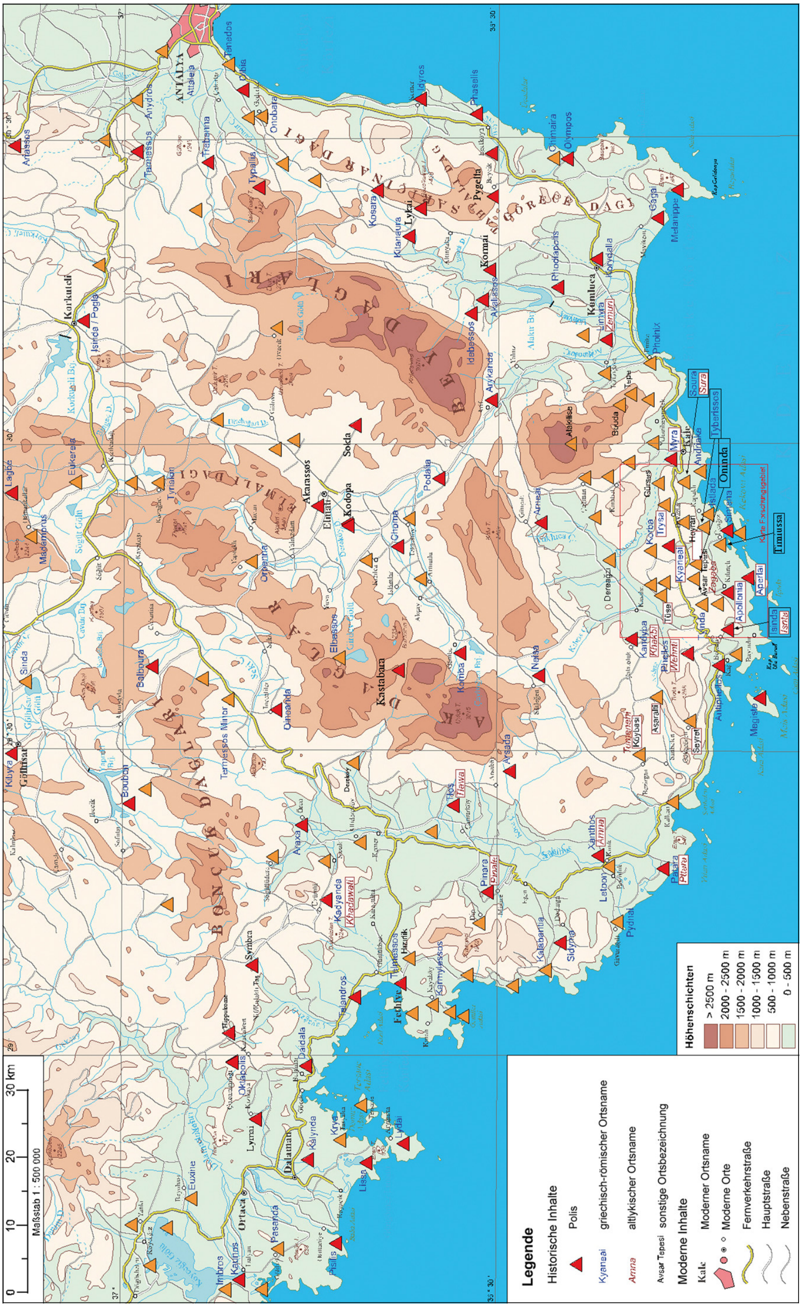

FIGURE 16.1 Map of ancient Lycia
LYKIEN-PROJEKT TÜBINGEN

and scale of these functions.[3] A classification of such settlements according to the modern criteria for 'town' or 'city' depends on the level of information we have about them.

Before about 600 BCE there is no evidence for stone architecture in Lycia, except for tombs of the seventh century.[4] Lycian settlement architecture in stone first appears on more or less steep hills situated at a distance of several kilometres from the coast. The earliest identifiable settlement structures, dated to the sixth and fifth centuries BCE, have been discovered at *Xanthos* (Fig. 16.2): on a 26 ha settlement area there are residential buildings, sanctuaries, impressive tombs and fortification walls encircling at first an acropolis, somewhat later the whole settlement.[5] Pillar tombs decorated with reliefs show Oriental and Greek motifs of war, the hunt, athletics, banquets and lions. As symbols of a ruler's power they indicate the existence of dynastic personalities who, from about 500, issued silver coins in Greek style with their names and that of the mint. Then from about 400 BCE remarkable rock-cut chamber tombs and sarcophagi, decorated with reliefs, point to the presence of aristocratic families. This settlement had political and administrative central functions for a relatively large territory protected by fortifications on its borders, and it had an urban character, although residential quarters and industrial establishments have not yet been found.

2 The Hill-Top Settlements of Sixth-to-Fourth Century Lycia: Problems of Classification

The majority of Lycian settlements of the sixth-to-fourth centuries are of the same type as *Xanthos* and are best defined with the German term 'Burgsiedlung': this comprises settlements of rather different size, but all of them consist of a fortified acropolis and houses and tombs on the slopes, in most cases encircled by a fortification wall. In general, research to date has produced faint evidence for residential quarters of the archaic and classical periods and therefore does not allow reliable statements on population numbers, social structure and economic activities. The same applies to important dynastic sites like *Tlos* and *Pinara* in the *Xanthos* Valley, and Hızırlık, the archaic and early classical *Telebehi/Telmessos*.[6] More or less spacious buildings on their acropoleis

3 For such a definition with regard to the German term 'Stadt' see Kolb 1984: 15.
4 Hülden 2006: 263–279.
5 Des Courtils et al. 1998; Borchhardt and Bleibtreu 2013: 5–12.
6 Borchhardt and Bleibtreu 2013: 23–33; Hailer and Klinkott 2016; Buschmann 1993.

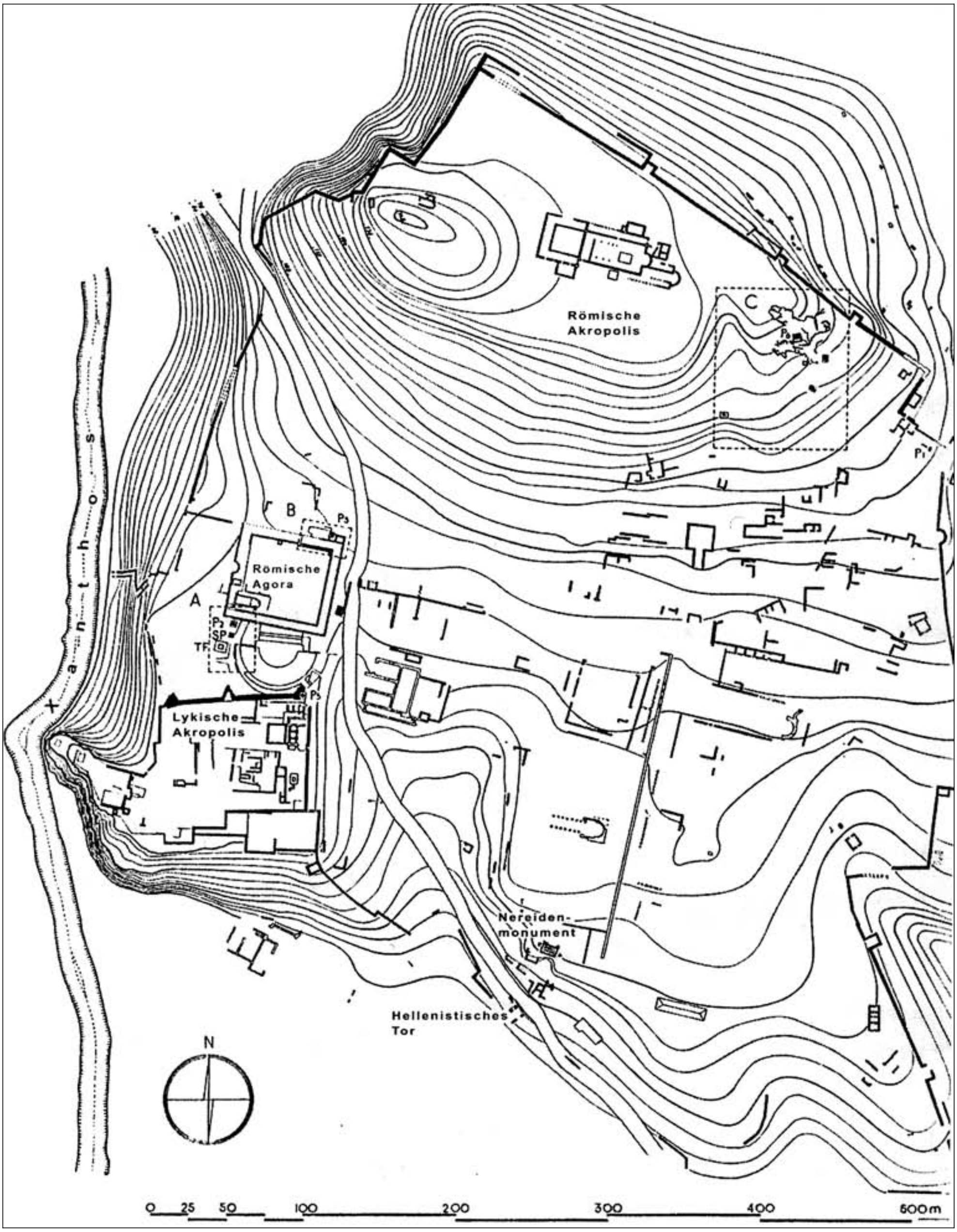

FIGURE 16.2 Plan of Xanthos
AFTER J. DES COURTILS 1998

served as residence of a ruling family, and the existence of an aristocratic elite is attested by impressive tombs. But none of these 'Burgsiedlungen' have preserved enough structures to allow a well-founded estimate of their population beyond the statement that a considerable number of rock-cut tombs speak in favour of several hundred inhabitants.

In eastern Lycia, *Zêmuri/Limyra*, with its magnificent acropolis and numerous rock-cut tombs, was the political and architectural rival of *Xanthos* from about 400 at the latest (Fig. 16.3). There, at least a small residential quarter, dated to the final years of the fifth century, has been excavated near the foot of the hill; it consists of houses of well-to-do families.[7] From about 400, inscriptions point to the existence of a diversified social structure and administrative and religious offices at a kind of princely court. Splendid tomb architecture and reliefs testify to a high cultural level and an urban quality of the settlement. The number of inhabitants at that time is estimated at about 1,500—mostly on the basis of the number of tombs.

Xanthos and *Limyra*, the most prominent Lycian settlements of archaic and classical times, may be classified as towns, the former already during the sixth and fifth centuries, the latter from about 400 at the latest. On the other hand, not only the already mentioned *Tlos*, *Pinara* and Hızırlık/*Telmessos*, but quite a number of other important 'Burgsiedlungen', where research is limited to survey activities, have not (yet) produced sufficient evidence for such a classification: for example *Tuminehi*, *Kerththi*, Seyret and *Phellos* in the western part of central Lycia. Among these, *Tuminehi* excels by covering a particularly large area with fortifications on three hills, among them a dynastic residence, and by possessing numerous rock-cut tombs, whereas Seyret shows an unusual arrangement of several aristocratic residences in towers integrated into the settlement wall without a recognisable single dynastic seat. In both cases survey work to date has been too superficial to allow a definition of their settlement structure, beyond their character as centres of dynastic or aristocratic power controlling a limited territory.[8]

There has been intensive survey work at *Phellos* (Fig. 16.4). During the second half of the fifth century this site became an important residence of members of the Xanthian dynasty, who were entrusted with the control of central Lycia. A settlement wall surrounded an area of about 5 ha, an acropolis and some remarkable pillar graves and rock-cut house tombs, in particular those in a *temenos* called 'the Heroon of *Phellos*'. *Phellos* controlled a rather large territory

7 Borchhardt 1993; Marksteiner 1997; 2012: 199–209; Borchhardt and Bleibtreu 2013: 17–22.

8 Borchhardt and Bleibtreu 2013: 127–129; Borchhardt, Neumann and Schulz 2003; Marksteiner 1997: 93–98; Kolb 2013.

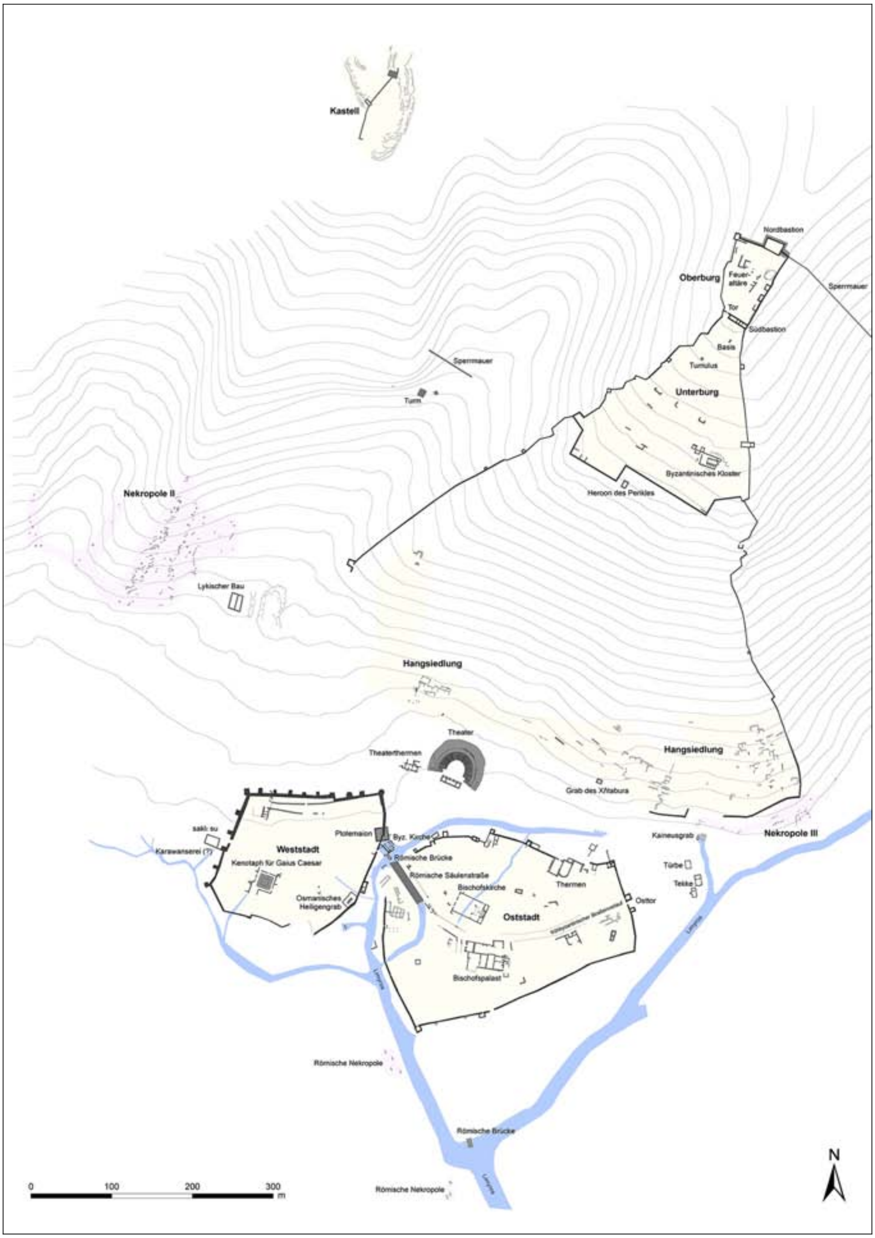

FIGURE 16.3 Plan of Limyra
BY COURTESY OF LIMYRA PROJECT, MARTIN SEYER

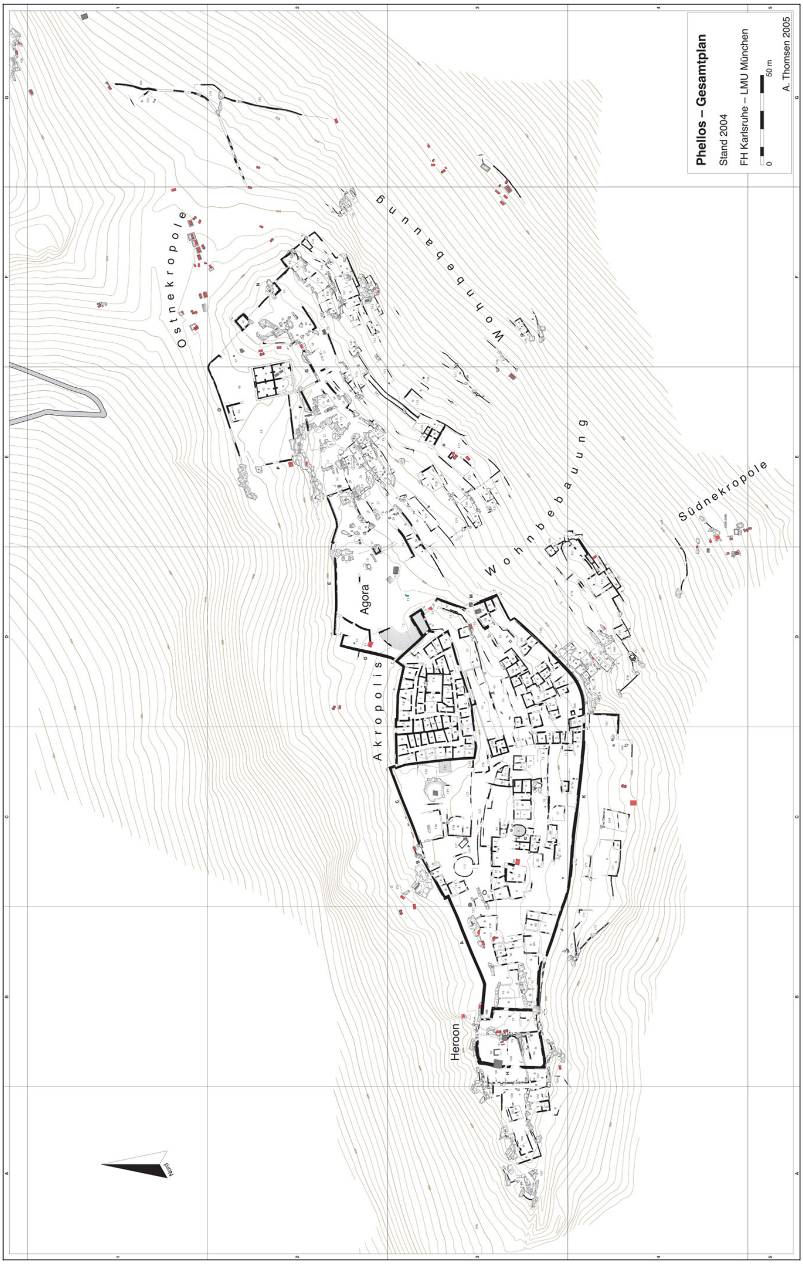

FIGURE 16.4 Plan of Phellos
BY COURTESY OF MARTIN ZIMMERMAN

and a harbour (see below). Moreover, as a residence of Xanthian dynasts, it had an additional important central-place function in central Lycia.[9] Yet, unfortunately, architectural details of the settlement and early residential quarters are hardly identifiable, because large parts of the settlement have been built over in later times. The number of tombs points to a population of only a few hundred persons, and we have no precise informations about its social and economic structure.

The state of research regarding the settlement structure of archaic-classical 'Burgsiedlungen' has, however, changed considerably since the 1990s, owing to the results of a survey conducted by a team from the University of Tübingen in a region, more precisely a 'Siedlungskammer', of only about 135 square kilometres in central Lycia.[10] The 'Yavu-Bergland' or 'Demre-Plateau' is formed as a triangle by two deep river valleys and a mountain chain. Largely covered with a dense macchia forest, it has well preserved its ancient and Byzantine settlement structure (Fig. 16.5). The architectural remains of 80 settlements (marked in red), among them six 'Burgsiedlungen', 430 farms (green) and numerous other ancient installations allow a rather detailed reconstruction of settlement types, their development and their economic basis from the sixth century BCE to the 13th century CE. Because of scattered similar findings in other areas of Lycia, these results can claim a general basic validity at least for the Lycian peninsula south of the Taurus Mountain range.

With regard to the central themes of this paper, the six late archaic and classical 'Burgsiedlungen' come into play. By far the largest among them is *Zagaba*, situated on a hill called Avşar Tepesi. Unknown before our survey, it is the most important example of a typical late archaic and classical Lycian settlement.[11] In a time of warlike conflict between *Xanthos* and *Limyra* at the beginning of the fourth century, *Zagaba* was conquered, partly destroyed and finally abandoned by its inhabitants. It was not reoccupied in Hellenistic and Roman Imperial times, and thus it preserved its genuine Lycian character.

Its built-up area is almost 14 ha in extent (Fig. 16.6), of which 9 ha are surrounded by a fortification wall. Besides a few Bronze Age sherds, the earliest pottery belongs to the seventh/sixth century. The first architectural remains are some tombs and houses of the sixth century, but a clear picture of the settlement structure is available only from the first half of the fifth century. A fortified acropolis is situated in a corner of the settlement, as is usual in Lycian

9 Zimmermann 1992: 186–198; id. 2005; 2006.

10 Kolb 2008.

11 Thomsen 2002; Kolb 2008: 33–65.

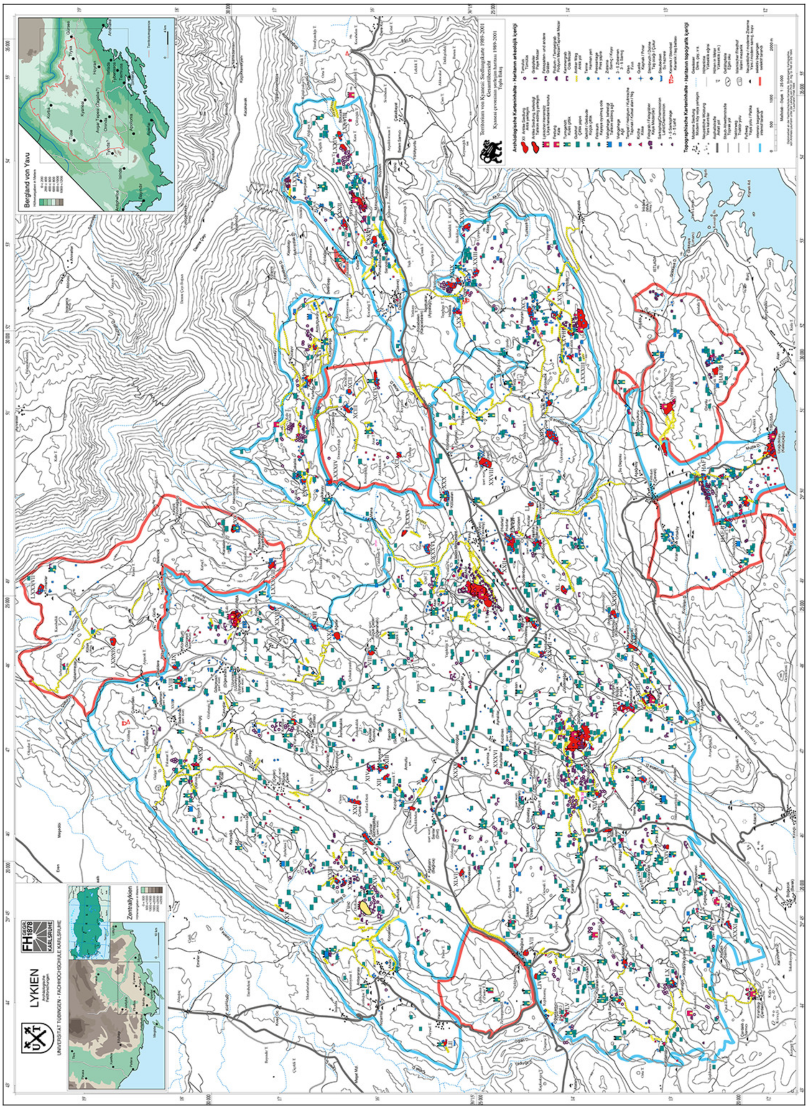

FIGURE 16.5 Settlement map of the Yavu-Bergland
LYKIEN-PROJEKT TÜBINGEN

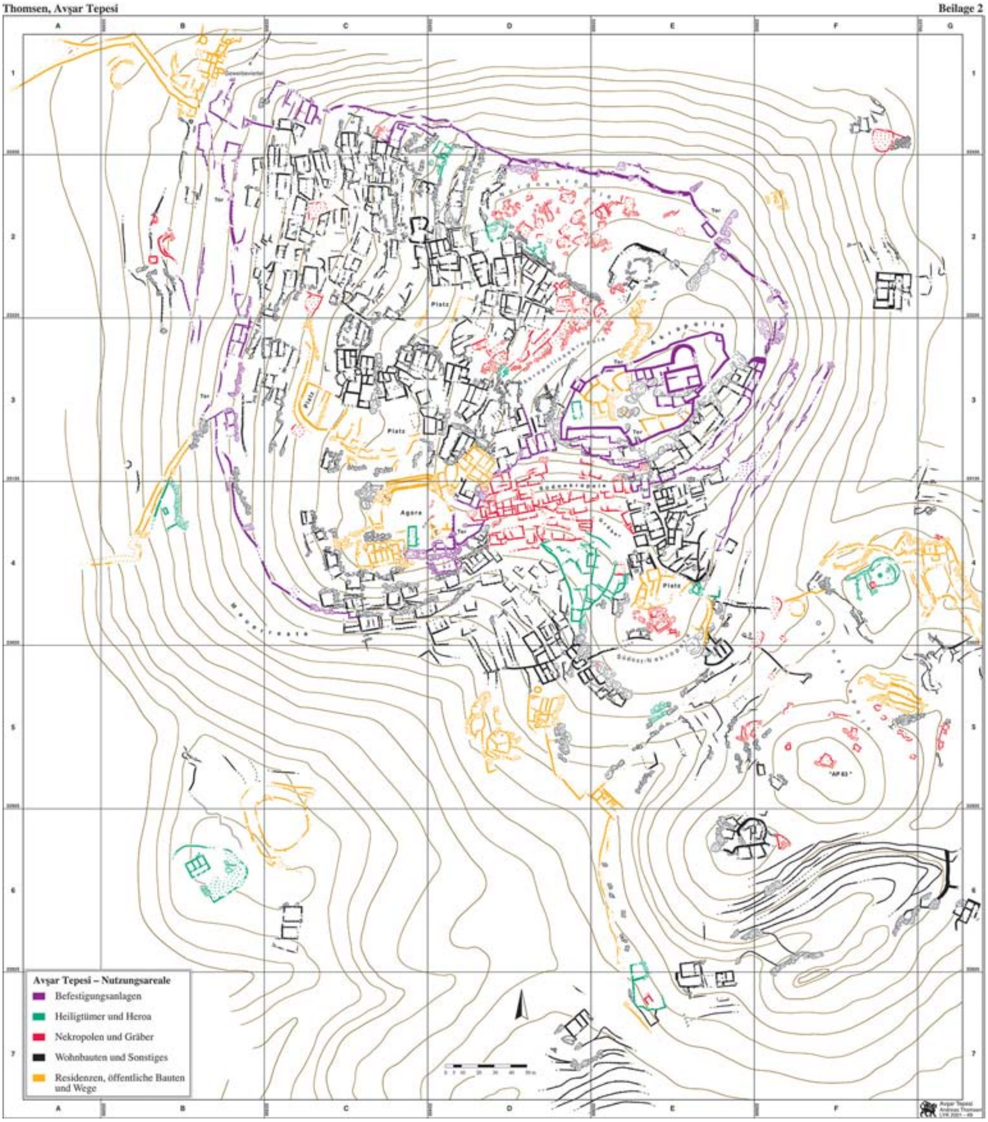

FIGURE 16.6 Plan of Zagaba/Avşar Tepesi
LYKIEN-PROJEKT TÜBINGEN

'Burgsiedlungen'. It comprises a spacious central tower, warehouses, large cisterns and possibly a temple. West of the acropolis a square, measuring 52 × 48 metres, was laid out in the first half of the fifth century and lined with constructions: a large temple podium, opposite to it a substruction for a wooden grandstand for an audience, and further buildings of a probably adminstrative and cultic purpose, for example in the south-west corner a large, at least two-storeyed building with a basement that is divided into several rooms. The constructions on this square imply its function as a site for sacred and ceremonial activities. The remains of two pillar tombs on the square point to a specific veneration of the personalities buried in them. We have called this square an *agora*, and this is justified by the discovery of a bilingual Lycian-Greek inscription on a classical sarcophagus in the nearby 'Burgsiedlung' of *Kyaneai* which mentions 'gods of the Agora' and attests the Lycian word *nele* as corresponding to Greek *agora*.[12] We do not know if the square was also used for political business. Assemblies of the people similar to those described in the Homeric epics may have taken place there. From about 400, the term *teteri* appears in Lycian inscriptions,[13] apparently indicating something like a citizen-body.

Spacious residential quarters in a remarkable state of preservation were found, with about 130 houses still visible on the surface in the form of very solid stone foundations, on top of which there must have risen half-timbered walls for at least two storeys. Allowing for quite a few houses hidden under the surface and calculating 6–7 inhabitants for each house, we may asssume a population of about 1,000 persons. This fits the number of somewhat more than 100 family tombs identified in the burial areas. The residential quarters differ in quality. The most spacious and distinguished houses occupy the area between the acropolis and the agora, including a particularly large complex at the north-east border of the agora that may have been the residence of the dynastic family. A similar difference in quality can be observed with regard to the tombs. The most conspicuous ones are situated in the south necropolis on the slope below acropolis and agora.

What does the archaeological evidence tell us about the social and economic structures of this settlement? There are no farm buildings within the settlement area, but quite a number of especially large ones in its immediate surrroundings. These wealthy landowners may have owned a residence in the settlement, too, as members of its social elite. Moreover, persons with cultic and administrative functions certainly resided in the privileged residential quarters. Besides

12 Neumann and Zimmermann 2003.

13 Neumann 1979: n. 324; Bousquet 1992: 183.

the agora, there are some minor squares within the settlement which probably served economic purposes, one of them apparently as a cattle market, because an exceptionally broad and solid way suitable for sustaining the weight of livestock leads from a gate in the settlement wall up to this square. A small industrial area with a series of basins in the north-west immediately outside the defensive wall points to the presence of tanners and fullers. Lycia was famous for the quality of its goat hides. They may have been exported in exchange for the imports reflected by rather numerous East Greek and Attic pottery fragments found in the settlement area. There are also indications of local pottery production, and craftsmen specialised in metalworking and in the construction of buildings in stone, wood and framework must have been available. Lycian dynasts produced coins in a mint at *Zagaba* from about 480 until the beginning of the fourth century,[14] and silver as well as small bronze coins for petty transactions have been found there. The use of writing is attested by Lycian graffiti on pottery sherds.

What conclusions can be drawn from this evidence with regard to the character of the settlement? Certainly, it was not a village. But did it have an urban character? There is apparently no thorough planning on the basis of a concentric or orthogonal road system; the houses are placed on natural terraces of the terrain, connected by a route system with a hierarchical network of rather broad ways, narrow lanes and stairways. However, the location of the acropolis, agora, cemeteries and industrial quarter points to careful planning. Moreover, *Zagaba* had a diversified architecture: fortifications, public squares, official buildings, sanctuaries, warehouses, workshops, private residences and tombs of different quality. It had a diversified economy and a structured society, and because of its size and population, it must have been the political, administrative, military and economic central place of the whole 'Siedlungskammer' of the Yavu-Bergland. Moreover, it must have offered a visitor approaching this settlement a rather impressive view with its towering, probably painted, houses placed on terraces rising one above the other, its high defensive walls and its mighty acropolis. We may be justified in calling *Zagaba* a town.

The applicability of the label 'town' is more doubtful in the case of the 'Burgsiedlungen' around *Zagaba*: Tüse, *Korba*, *Kyaneai*, Hoyran and *Trysa*. All of them controlled a certain territory. This set them apart from mere hill-forts without settlements and where one single tomb shows that they were the residence of a single aristocratic family. But they also differed from *Zagaba*. *Korba*

14 Kolb and Tietz 2001.

and *Trysa* may serve as examples. *Korba* existed from the early fifth century.[15] A fortification wall surrounded an only 2 ha settlement, including an acropolis. Relatively few houses can be attributed to the classical period and just as few tombs. *Korba* was a second-rank 'Burgsiedlung'. This was also true of *Trysa*—until about 400. But at the beginning of the fourth century this settlement was completely restructured (Fig. 16.7) to become a luxurious princely residence.[16] A walled area of only 2.5 ha enclosed a fortified acropolis and the most splendid dynastic residence up to now known in Lycia, composed of five large buildings arranged around a court and covering a space of altogether 1,135 square meters, one fourth of the whole residential area of the settlement. Other well-built houses testify to the presence of an aristocratic elite, and this picture is confirmed by tombs. The so-called Heroon of *Trysa* is one of the most spectacular monuments of art in classical Asia Minor, and close to this dynastic burial site are situated impressive tombs of aristocratic followers of the dynast. This extraordinary transformation of a small 'Burgsiedlung' into a princely residence is due to political events around 400, when the dynastic family of east Lycian *Limyra* conquered central Lycia from the Xanthian dynasty and marked its triumph by constructing this residence for one of its members. *Trysa* counted hardly more than 200–300 inhabitants. *Trysa* was neither a city nor a village. Was it a town or town-like?

The development of *Trysa* was contemporary with the abandonment of *Zagaba* which up to that time had controlled the smaller 'Burgsiedlungen' and their dynastic families—including that of *Kyaneai*. Turning to this site, we are going to cross the border to the Hellenistic period. The predominance of *Trysa* in the region was a short-lived one. In 360 Maussollos, satrap of Caria as representative of the Persian king, was appointed as satrap of Lycia, too, with the instruction to abolish the dynastic system and introduce a polis system. *Kyaneai* was selected to be the polis-centre of the region with the other previous dynastic sites becoming *komai*, rural communities on the territory of this polis, that is, villages with local self-administration controlling the same territories as previously in their function as dynastic 'Burgsiedlungen'. They disposed of an agora, public buildings, a citizen assembly (*demos*) and official functionaries. They experienced demographic and architectural growth, and the old hill-forts sometimes maintained a function as fortresses of the polis.[17] These *komai* had geographically limited central-place functions; they appear to be more than mere villages, but less than towns.

15 Geppert and Thomsen 2006; Kolb 2008: 103–107.
16 Marksteiner 2002; Kolb 2008: 81–93.
17 see Kolb 2008: 187–211.

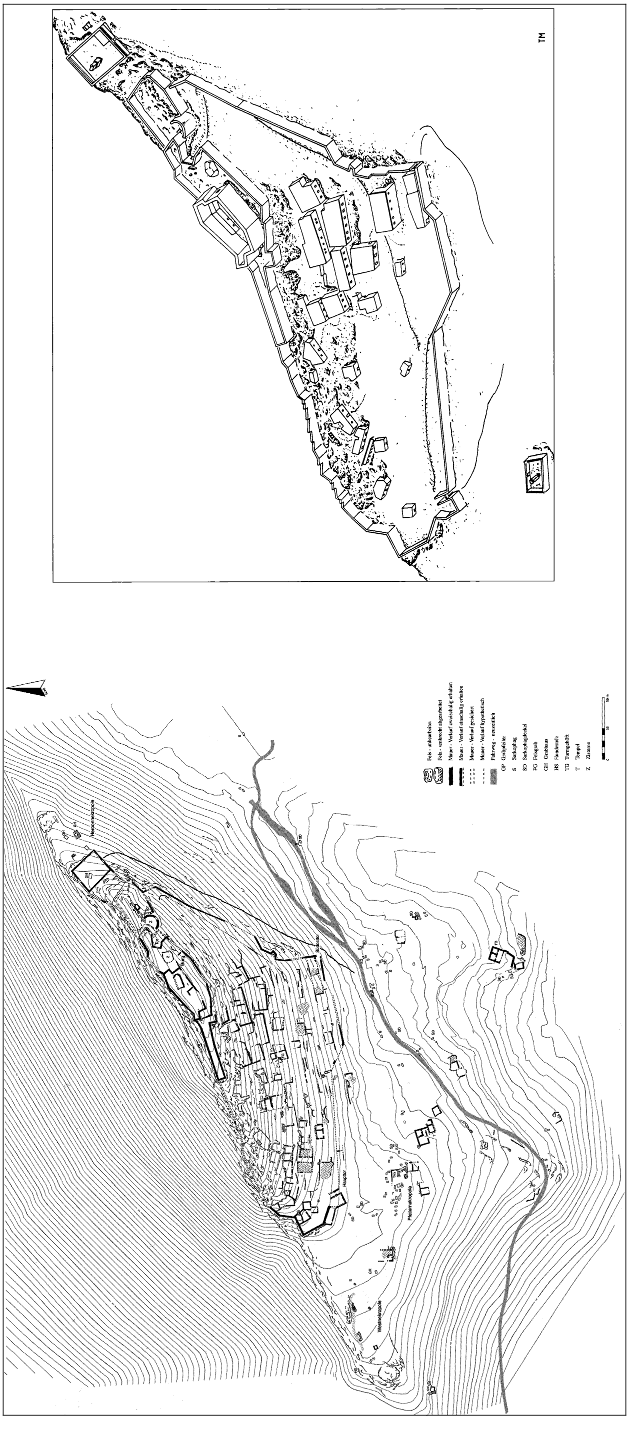

FIGURE 16.7 Plan and reconstruction of Trysa
LYKIEN-PROJEKT TÜBINGEN

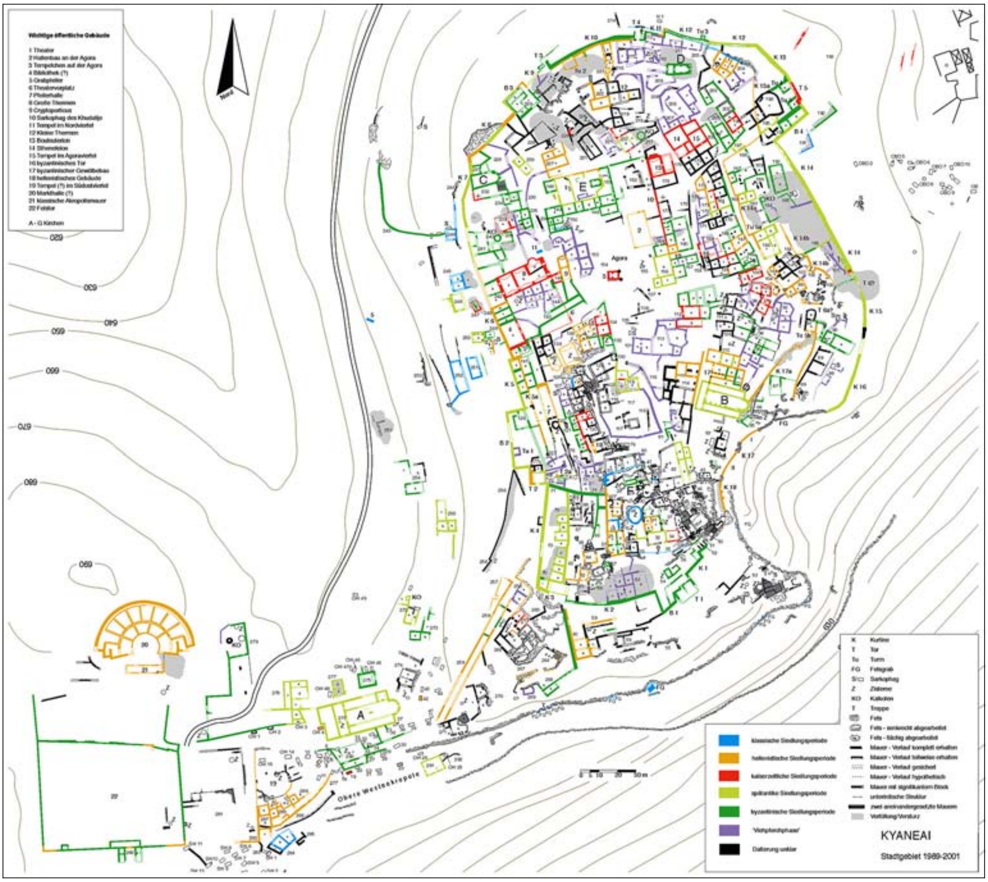

FIGURE 16.8 Plan of Kyaneai
LYKIEN-PROJEKT TÜBINGEN

3 Urbanism in Late-Classical and Hellenistic Lycia

At *Kyaneai* (Fig. 16.8),[18] only slight remains of the acropolis and remarkable tombs of the first decades of the fourth century testify to its importance at least in the late classical period (marked in blue). When it became a polis-centre around the middle of the fourth century, first a settlement wall, encircling an area of less than 4 ha, was constructed, followed little by little by a few public buildings. Although the settlement plan reflects a palimpsest of construc-

18 Kolb 2010, Teil 1: Altripp, Gerner Hansen and Tietz; id. Teil 2: Hülden; Kolb 2008: 168–187.

tions and reconstructions down to the thirteenth century CE, it still allows us to recover the essential features of the Hellenistic centre (marked in yellow). The Hellenistic agora continued that of the classical period; it was now surrounded by a cryptoporticus on its west side and a stoa in the north as well as in the east. Another hall was running parallel to the western settlement wall. In the east a complex of three public buildings with architecture in the Doric order comprised a stoa and possibly a temple. A new street system did not create a thorough orthogonal plan of the whole settlement, but only for each of the separate quarters. There are a few remains of Hellenistic houses within the walled area and outside the fortification wall close to the Late Hellenistic theatre. South of the theatre remains of Hellenistic walls may indicate a stadium; inscriptions attest a gymnasium and athletic competitions. A building inscription attests the existence of a temple for the goddess Eleuthera, entitled Archegetis, the main goddess of the polis. It may have been constructed towards the end of the first century BCE.

It has to be emphasised that not one of the buildings adorning *Kyaneai* with the usual outfitting of a polis-centre can be dated earlier than the second or first century BCE. This corresponds to the fact that Hellenistic inscriptions appear only from about 200 BCE. Even more revealing is the number of sarcophagi, the dominant type of tombs of rather well-to-do families in Lycia from the third century BCE. Of the 380 specimens found at *Kyaneai* only about 20 can be dated to the Hellenistic period with a reasonable degree of certainty. None of them belongs to the period before the second century BCE. The number of inhabitants of Hellenistic *Kyaneai* may be estimated as no more than about 500. *Kyaneai* was not a population centre, but rather a service centre. The magistrates, priests, other officials and their personnel resided there with their families, and the assembly of the citizens met in the theatre. But the polis constitution was still incomplete: as in all other Lycian poleis, the polis of the third and second century BCE was represented only by three *archontes* and the *ekklesia*; until at least the first century BCE there was no council.

Thus, the wealthy landowners, who in Hellenistic times cultivated olives and wine for export and built magnificent tower-farms,[19] had no voice in a special political institution. This explains why the rural communities continued to be their centres of interest, where they invested financial capital and installed a second residence in addition to their farm. *Trysa*, for example, received an agora, a stoa, a temple, another official building and new private residences, as well as 30 to 40 sarcophagi—more than *Kyaneai*. Its population may have

19 Kolb 2008: 213–234.

grown to at least 300 persons. A similar development can be seen at *Korba*, where an agora is bordered by a hall which served commercial purposes, and scattered architectural elements point to the existence of a Hellenistic temple. The residential area extended beyond the classical fortification, houses sometimes show splendid masonry, and most of the still-existent 53 sarcophagi belong to the Hellenistic period.[20]

This led to a very limited urban development of *Kyaneai* in Hellenistic times. And the case of *Kyaneai* is typical for the development of Lycian Hellenistic polis-centres in general.[21] Constructions of the Hellenistic period mainly concern fortification walls of the third or second century, theatres of the second or first century BCE and efforts to establish an orthogonal street system. At *Xanthos*, the excavators record a period of decline in Hellenistic times; even Hellenistic inscriptions and pottery are rather rare.[22] *Limyra* appears to be an exception: besides a Hellenistic fortification wall and a theatre, the so-called *Ptolemaion*, a ruler cult building of the third century for a king of Ptolemaic Egypt, as well as a large temple foundation and numerous architectural and sculptural fragments can be attributed to Hellenistic times.[23]

Particularly important for an assessment of Hellenistic urbanism in Lycia is the predecessor of the town of *Olympos* on the high peak of Musa Dağ.[24] It was founded in the third or second century BCE, and around 100 BCE it was listed among the six most important poleis in Lycia; in 78/77 it was conquered and deprived of its status as a polis-centre by the Romans during their war against the pirates and refounded on the coast in the second century CE at the latest. Although there was some continuity of habitation, the settlement on Musa Dağ has essentially preserved its Hellenistic appearance (Fig. 16.9). A fortification wall encloses an area of almost 14 ha. An agora is surrounded by a wall and on three sides by stoai with a couple of shops. Near the agora there are some buildings of unknown function. The later Christian basilica replaced a temple of Artemis. The absence of a theatre confirms the impression that most theatres in Lycia were not constructed before the later first century BCE. The absence of a council hall, a *bouleuterion*, is in accordance with the lack of council houses in Lycia before Roman Imperial times.

The settlement on Musa Dağ supports the impression of a weak and late development of urban structures in Lycian polis-centres during the Hellenis-

20 Geppert and Thomsen 2006.
21 Kolb 2009: 113–126, esp. 122–125.
22 Des Courtils et al. 1998.
23 Borchhardt 1993.
24 Adak 2004.

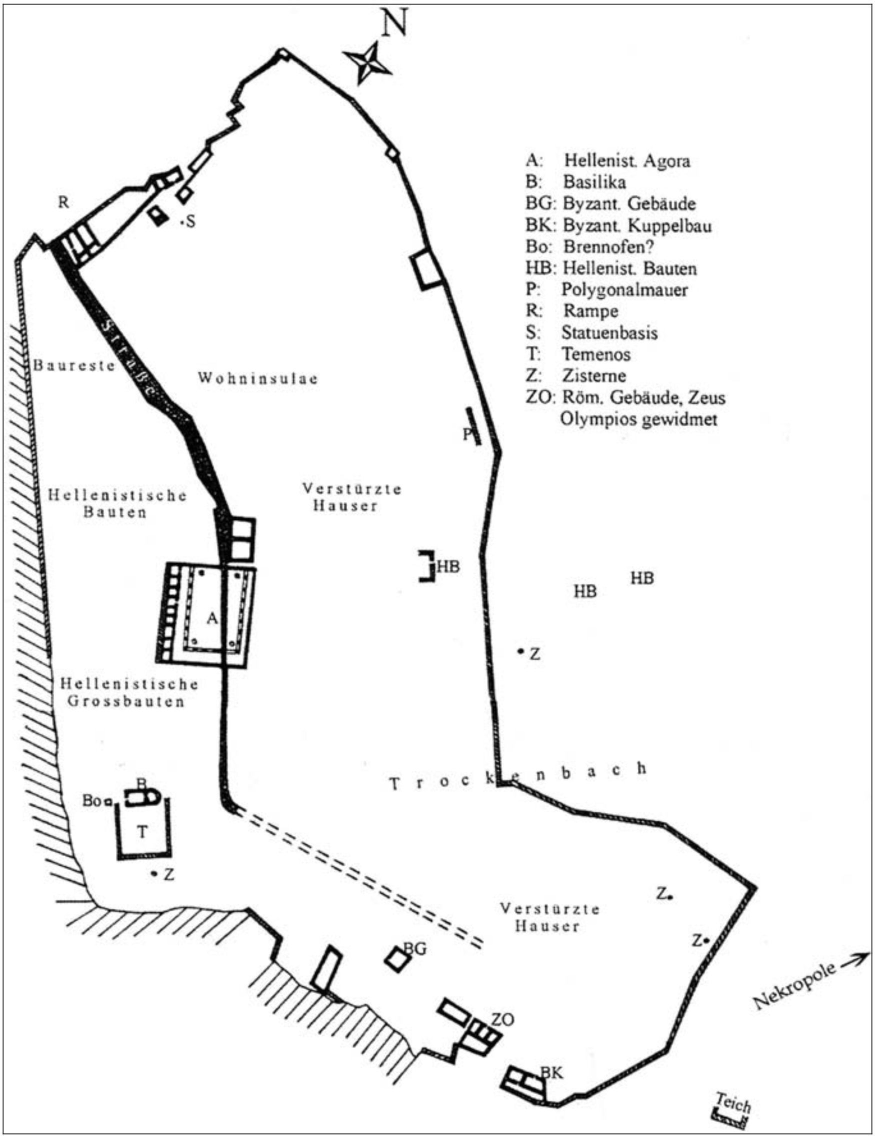

FIGURE 16.9 Plan of Hellenistic Olympos/Musa Dağ
AFTER TÜNER 2004

tic period. This is in accordance with the epigraphical evidence. Before the first century BCE there are no inscriptions which attest private donations or public loans of money for the construction of public buildings. The reasons may be twofold: the political and economic turmoils of the Hellenistic age during which Lycia was involved in the conflicts between Hellenistic monarchs, in a war against Rhodes, in Roman warfare in Asia Minor, and in the Roman civil wars, certainly reduced the financial possibilities of the Lycian poleis, which from the beginning of the second century BCE were united in the Lycian League. In addition, as we have seen in the case of *Kyaneai*, the absence of a council goes hand in hand with the attachment of wealthy landowners to their rural communities and their financial investment in public buildings and private residences in these rural settlements instead of making investments in the polis-centre. It is revealing that there are no sarcophagi in the settlement on Musa Dağ. Few people lived in this service centre of a polis, and they did not regard it as their true domicile. Was it a town or is it rather a warning that 'polis' or 'polis-centre' should not simply be translated as 'city' or 'town'?

There were regions in Lycia, where in the classical period 'Burgsiedlungen' had not come into existence and the formation of settlement centres occurred only from the fourth century BCE (see Fig. 16.1). In the Northern Highlands, poleis and their centres, like *Neisa*, *Komba*, *Oinoanda*, *Balbura* and *Boubon*, were not founded before the third century BCE, and very few buildings were constructed before Roman Imperial times, and none before the second century BCE.[25] But there was a tendency among the rural population to create small administrative and cultic centres. In the eastern Lycian hinterland a process of formation of small settlement centres on fortified hills seems to have started in the fourth century at *Arneai*, *Akalissos*, *Idebessos* and *Kormoi*. These settlements were not important enough to become separate polis-centres, and therefore they united in a so-called *sympoliteia* with common institutions and modest official buildings in one of these settlements.[26] A similar development took place in western Lycia, in the hinterland of the Gulf of *Telmessos*: small hilltops were equipped with a fortification wall and a few buildings. An inscription attests a *sympoliteia* with the name *Oktapolis*, i.e. composed of eight little communities. Tombs of considerable quality suggest that wealthy landowners demonstrated their adherence to these little centres by establishing their burial place there.[27]

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25 Heberdey 1898; Coulton 1998; Coulton et al. 2012; Hülden 2008: 135–141, 168–169, 171–178.

26 Zimmermann 1992: 133–140.

27 Tietz 2003: 248–285; Kolb 2015: 215–221.

In the case of Musa Dağ/*Olympos* we have found an example of a topographical shift of urbanistic development from mountain to coast in Roman Imperial times. In other cases this process started already in the fourth century BCE. The respective causes and results could be different. In the case of *Telmessos* the probable reason for the abandonment of the 'Burgsiedlung' at Hızırlık in favour of the harbour was the conquest of Hızırlık by Perikle of *Limyra* in the 80s or 70s of the fourth century. From then on the harbour settlement slowly developed the trappings of a polis-centre with a theatre and other public buildings, a process that during the fourth century was still accompanied by the construction of splendid rock-cut tombs of an aristocratic elite.[28]

Patara had been the harbour of *Xanthos* with a fortified residential building for a Xanthian representative on a low hill close to the harbour basin. In early Hellenistic times a large area was encircled by an impressive Hellenistic fortication wall, but sparsely filled with buildings (Fig. 16.10). A few remains of Hellenistic constructions have been identified, in particular a theatre and the first building phase of a *bouleuterion*, both erected in the late first century BCE. Scattered architectural blocks point to the existence of a temple. A few dozen Hellenistic tombs do not speak in favour of a numerous population. Authors of Augustan times hail *Patara* as one of the most important poleis of Lycia or even as *caput Lyciae*. This fits somewhat the evidence of the late first century BCE, but is probably in the first place due to *Patara*'s great importance as a harbour, especially during the Roman civil wars.[29]

In central Lycia, the shift from mountain to coast is exemplified by *Phellos* and its harbour *Antiphellos*.[30] We have seen that until the first decade(s) of the fourth century *Phellos* was an important dynastic centre, the residence of members of the Xanthian dynasty, equipped with all the buildings of a remarkable 'Burgsiedlung'. This role ended with its conquest by Perikle of *Limyra*, in the 390s. In the course of the fourth century, *Phellos*' harbour *Antiphellos* developed a settlement and around 300 BCE became the centre of an autonomous polis. Although it is nowadays covered largely by the Turkish town of Kaş, one still finds remains of the Hellenistic period: remarkable tombs attesting a wealthy elite, a fortification wall which included a large area, and a spacious theatre. In Roman Imperial times, an agora with shops and warehouses flanked on three sides by *stoai*, and a probable *bouleuterion* reveal a further develop-

28 Buschmann 1993; Tietz 2003: 81–85, 297–302.

29 Işkan et al. 2016: 16–22, 29–99; Işkan and Işık 2015: esp. 385–416 (F. Kolb) and 593–602 (M. Zimmermann).

30 Zimmermann 1992: 186–198; id. 2005; 2006.

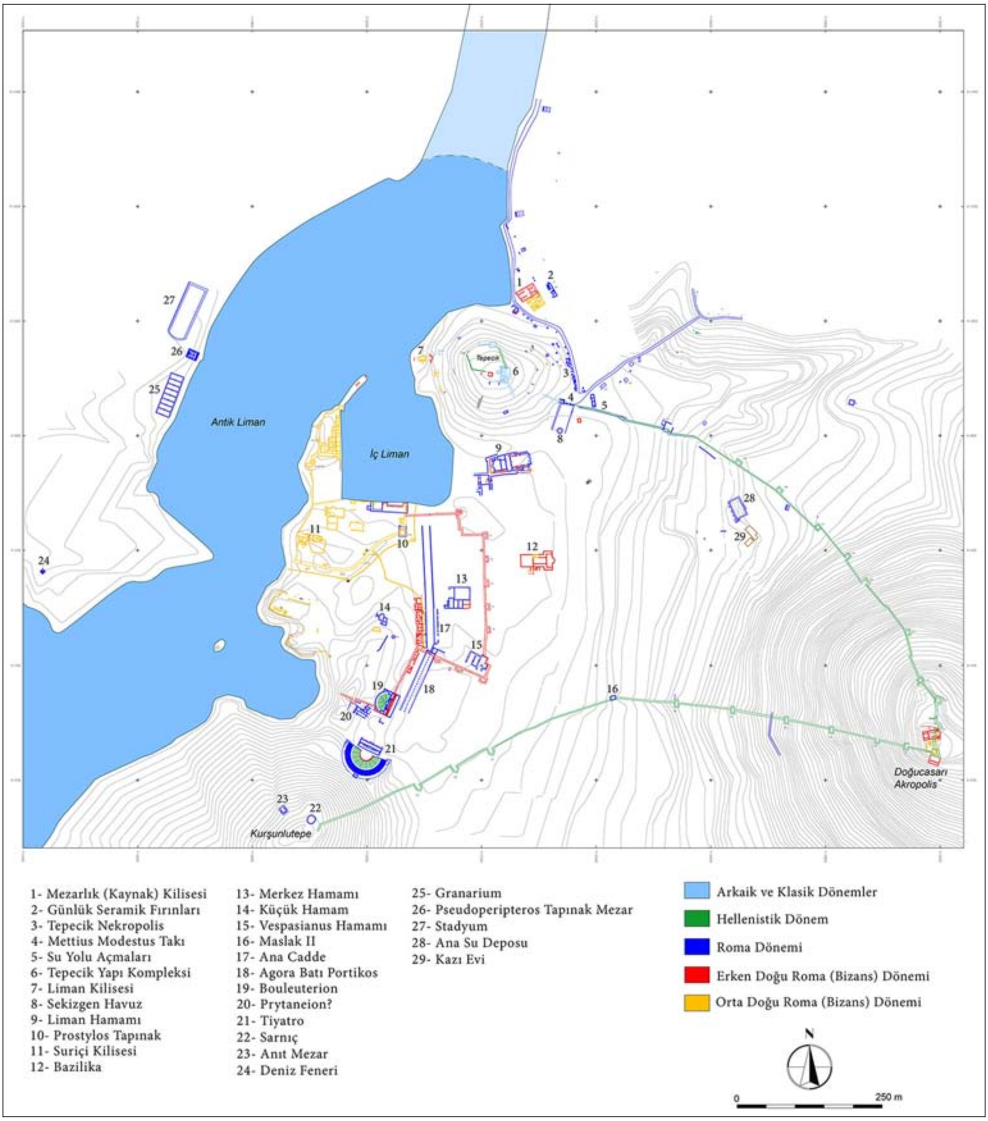

FIGURE 16.10 Plan of Patara
GRABUNGSARCHIV PATARA

ment of the polis-centre. *Phellos* itself also became a polis-centre in Hellenistic times, but without an urban expansion worth mentioning; only a small theatre was constructed, the classical monuments were carefully preserved, and the 'museum' *Phellos* continued to be a place of reverence for both poleis.

This soft urbanistic shift from mountain to coast proceeded in a comparable way in the case of other central Lycian 'Burgsiedlungen': *Isinda*, *Apollonia*, *Tyberissos* on the one hand,[31] and their harbours, *Aperlai*, *Timiussa*, *Simena*, on the other (see Fig. 16.1).[32] Towards the end of the fifth century all three harbours had been protected only by the fortified residence of an aristocratic functionary, who was dependent on one of the dynastic centres in the hinterland. Yet, from the fourth century on, they developed settlements with fortification walls and official buildings like a theatre; finally, this led to *Apollonia*, *Isinda*, *Aperlai* and *Simena* becoming formally equal members of a *sympoliteia*, but with *Aperlai* economically superior, largely because of a voluminous production of purple from murex shells. *Apollonia* and *Aperlai* seem to have had rather large residential areas and might possibly be classified as towns. *Tyberissos* and *Timiussa* were overpowered by the important polis of *Myra* that forced *Tyberissos* into a *sympoliteia* and restricted *Timiussa* to the status of a *kome* on its territory. Nevertheless, in Roman Imperial times *Timiussa* (Fig. 16.11) was to become an important centre of the saltfish industry and international trade, as attested by sarcophagi with funeral inscriptions for traders from *Puteoli*, *Askalon* and *Byzantium*. In this role it was a central place for its hinterland.[33] But was it a town?

These examples demonstrate that the upswing of trade and commercial activities in (Late) Hellenistic times essentially contributed to the development of urbanism in coastal settlements. This process of urbanisation was considerably reinforced by the formal integration of the region into the Empire, when Lycia became a Roman province in 43 CE.

4 Lycian Towns in the Roman-Imperial Period

Of the previous splendour of ancient *Myra*, situated in the eastern part of central Lycia, only scarce remains of the classical acropolis and settlement wall, marvellous late classical and Early Hellenistic rock-cut tombs, a luxurious the-

31 Wurster 1993: 10; Marksteiner 1997: 91–92; Zimmermann 2003.

32 Vann et al. 2002; Leadbetter 2007; Zimmermann 1992: 129–132; Wurster 1976.

33 Zimmermann 2003.

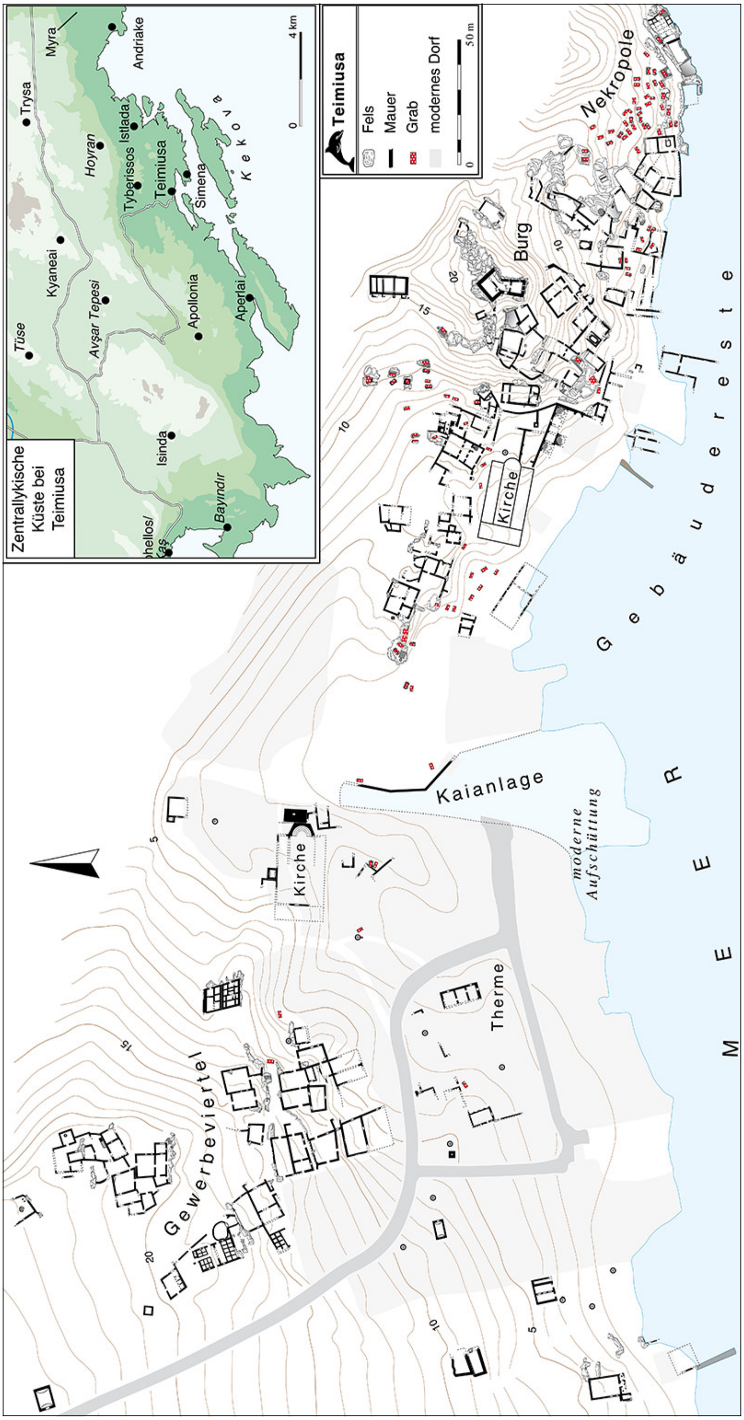

FIGURE 16.11 Plan of Timiussa
BY COURTESY OF MARTIN ZIMMERMANN

atre and a bath from Roman times have been saved from the inundation of the plain by the river *Myros*.[34] Its harbour *Andriake* became important from the Late Hellenistic period, but its architectural infrastructure in the form of a regular street grid, an agora with shops, an industrial quarter, shipyards, a large granary and residential areas, did not develop before Roman Imperial times, when the harbour also benefitted from a purple industry.[35] *Andriake* raises the same question as *Timiussa*: was it a town?

Due to deposition of sediments *Myra* was largely covered by alluvial soil. A similar fate befell *Limyra* in eastern Lycia, although here the alluvial cover is less extensive. Besides numerous tombs and a theatre, excavations at *Limyra* have uncovered a bath, a magnificent cenotaph for Augustus' grandson Gaius Caesar who died in the town, other high-quality art objects, and remains of a street grid with an 8 m wide boulevard, lined by columned halls and shops (Fig. 16.3). Together with the honorary title 'metropolis of the Lycian ethnos' these constructions point to an urbanistic development that justifies us calling *Limyra* a town. Its income derived from the agrarian fertility of its surroundings and its harbour *Phoinike*, nowadays Finike.[36]

Similar economic advantages explain the outburst of urbanism at *Rhodiapolis* where this development is much better preserved than at *Myra* and *Limyra*. The splendour of urban fixtures in this 26 ha town, which is situated on a 300 m hill in the hinterland of *Limyra*,[37] leads one to imagine what has been lost in other cases. Recent excavations have brought to light a compact city centre, separated from the residential quarters, with an amazing ensemble of public buildings carefully organised on terraces and covering an area of about 4 ha (Fig. 16.12). It seems that, besides pottery, only rock-cut tombs with Lycian inscriptions attest the existence of the settlement in classical times. The Hellenistic period is represented by inscriptions, statue bases, coins, the theatre cavea and perhaps a fortification on top of the hill. The heyday of *Rhodiapolis*' urbanism, however, was the second century CE, when this polis was the home of the most famous and wealthiest Lycian, the generous sponsor of public buildings and other financial donations to Lycian communities of his time: Opramoas. His generosity helped transform *Rhodiapolis* into a jewel of Roman urbanism, reflected in an agora, colonnaded avenues, several temples, a council hall, an archive, a large and a small bathhouse, a fountain house, a Sebasteion, and so on. Opramoas was honoured by the citizens with a temple

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34 Borchhardt 1975.
35 Borchhardt 1975: 64–75, 401–411; Forstenpointner et al. 2007.
36 Borchhardt 1993; Marksteiner 2012; Borchhardt and Bleibtreu 2013: 17–23.
37 Çevik, Kızgut and Bulut 2010.

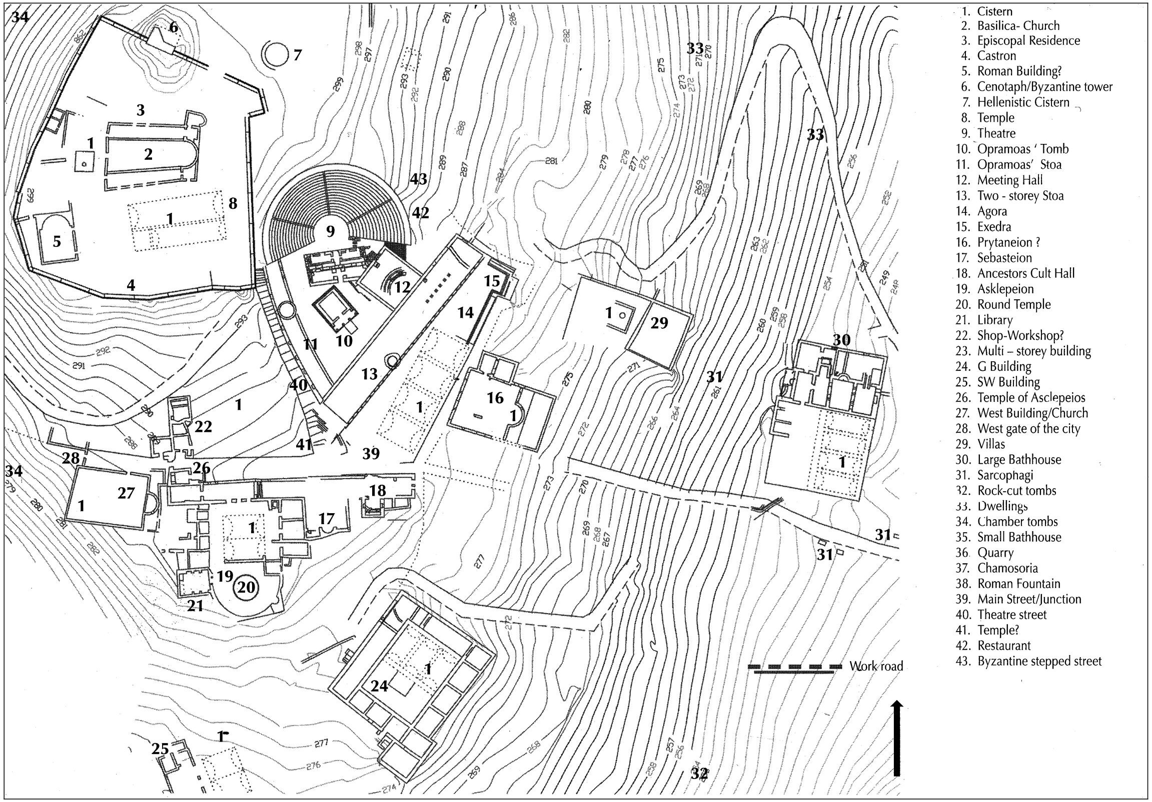

FIGURE 16.12 Plan of Rhodiapolis
AFTER ÇEVIK/KIZGUT AND BULUT 2010

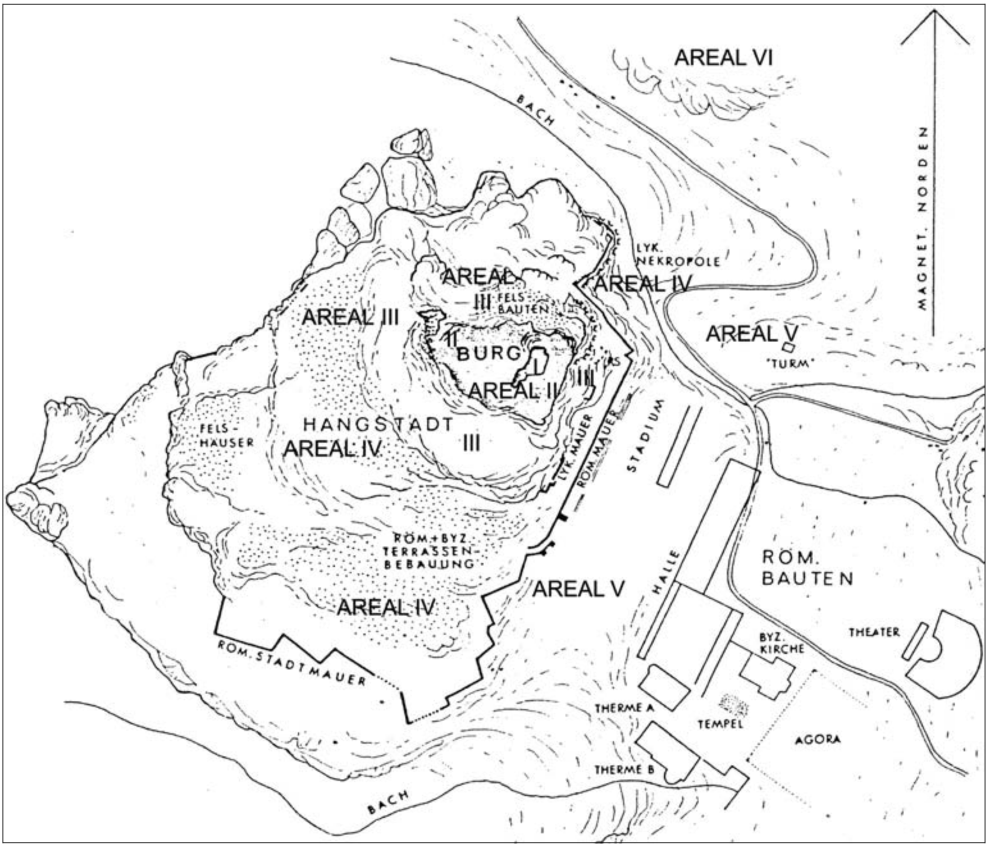

FIGURE 16.13 Plan of Tlos
AFTER WURSTER 1976

tomb surrounded by stoai and decorated with the longest Greek inscription of Anatolia in the very centre of the town. From there one enjoys a spectacular view towards the sea.

On a somewhat more modest, but nevertheless astonishing, scale a contemporary example of Roman urbanism can be visited at *Arykanda*,[38] a small polis-centre squeezed into a narrow valley along a river and the main road which connects the east Lycian coast with the Elmalı plain in the north. Arranged on a steep slope, an agora, a temple, administrative buildings, a theatre, a bath and even an abridged version of a stadium suggest that immediately adjacent impressive tombs should be attributed to the sponsors of this flourishing

38 Knoblauch and Witschel 1993.

urban settlement. The wealth probably derived from *Arykanda*'s position about halfway along the trade route mentioned above, and from timber trade exploiting the rich, surrounding forests.

The splendour of Roman urbanism culminates at *Patara* (Fig. 16.10), where it took a great effort to recover at least a considerable part of the city from sand. Revenues from the harbour activities as well as *Patara*'s role as the capital of the Lycian League and seat of the Roman provincial governor guaranteed financial support by wealthy and influential persons.[39] A harbour agora with the famous *Milliarium Lyciae* was laid out under Claudius. A large and long colonnaded street connected it with the city agora which boasts a 120 m long West Stoa; its first construction phase is dated to the Early Imperial Period. From the time of Trajan, a monumental arch with three gate-ways marked the entrance into the city not only for persons but also for a magnificent aqueduct that transported fresh water from the central Lycian mountains. Among the five baths at *Patara*, the so-called Nero Bath is the earliest known example of a bath building in Lycia. The Hellenistic theatre and the council hall of the Lycian League were considerably enlarged and embellished during the Antonine period, and at the same time a temple in the Corinthian order was built. A stadium was laid out near the harbour, and a warehouse, similar to the granary at *Andriake*, was erected under Hadrian. The importance of the harbour was underlined by the construction of a magnificent lighthouse under Nero. Several temple tombs point to the presence of wealthy citizens, among them leading representatives of the Lycian League.

Patara's urbanistic embellishment by far exceeded that of the old Lycian capital *Xanthos*, although there, too, essential elements of Roman urbanism were introduced, for example a street grid with a colonnaded *cardo* and *decumanus maximus*, a city gate in honour of Vespasian, a monumental fountain, a theatre, a second agora, a Roman bath and an aqueduct.[40] *Tlos*, too, received a remarkable ensemble of public buildings: temples, porticoes, splendid baths, a large stadium, and an elegant theatre, all this embedded in a rather symmetrical urban plan (Fig. 16.13).[41] *Tlos* was situated not at the coast, but in the upper *Xanthos* Valley. In general, urbanisation no longer consisted only of a shift from mountain to coastal plain. It spread towards the hinterland, even up to the Northern Highlands, to *Oinoanda*, *Bubon* and *Balbura*, though on a more modest scale than in settlements close to the coast.[42]

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39 see the literature quoted in n. 29, especially the contribution by M. Zimmermann.

40 Des Courtils et al. 1998.

41 Korkut 2016.

42 Coulton et al. 2012.

The introduction of urban luxury is also evident in a small town like *Kyaneai*.[43] In Roman Imperial times, *Kyaneai* obtained a council hall, a monumental entrance gate into the town, two bath buildings, a temple, a small sanctuary for the emperor cult on its agora, and a *bibliotheke* (Fig. 16.8: marked in red). Remarkable honorary and sepulchral monuments attest the presence of a wealthy elite with some leading functionaries of the Lycian League. A local equivalent of Opramoas was a certain Iason, who received a unique honorary monument with the largest rock-cut inscription of Greek and Roman antiquity in the necropolis area of the town and another honorary inscription in the vestibule of the council hall. He was the most prominent representative of a family which obviously dominated *Kyaneai*'s public life during the second half of the second and the first decade of the third century, making donations and financing the construction of public buildings like the council hall, the town archive (*bibliotheke*), and so on at *Kyaneai*, but also buildings and donations in other Lycian poleis. Iason and Opramoas belong to those representatives of the Lycian elite who obviously had no ambition of 'becoming Roman' and entering a career as a Roman *eques* or senator, but were content with playing leading roles in Lycian poleis and the Lycian League. Lycian urbanism during Roman imperial times was largely financed by these wealthy families who must have obtained their revenues essentially from olive and wine cultivation, goat herds and the timber trade.

While in other Lycian towns and cities of the period few residential quarters have been identified, at *Kyaneai* we can still identify inhabitable Hellenistic houses, new ones of the Roman period and others which cannot be dated precisely (marked in black), adding up to about 150 possible residences with up to 1,000 inhabitants. In addition, 500 tombs can still be identified, among them 380 sarcophagi, almost all from the Imperial period. This large number of sarcophagi at *Kyaneai* goes hand in hand with a declining number of such burials and building activities in some of the rural centres, which had been flourishing in Hellenistic times, whereas now they suffered from stagnation or decline. On the other hand, small hamlets multiplied side by side with isolated farms.[44] The total population on the 135 square kilometres of the polis territory increased considerably, from about 3,000 in Classical to about 6,000 in Roman Imperial times. There was no dramatic population shift from country to town, but the well-to-do now identified themselves with the polis and its centre; they invested capital in its embellishment and erected their sarcophagi and monumental tombs along the roads leading into the polis-centre instead of in the countryside.

43 see the literature quoted in n. 18, and Kolb 2008: 271–295.

44 Kolb 2008: 296–321.

5 Conclusions

In archaic and classical times *Xanthos* and, at least from about 400, *Limyra* were the only 'Burgsiedlungen' which may be classed as urban centres based on their high level of architecture and art, and because of their role as important political and administrative centres. Little can be said about these settlements as demographic and economic central places, but it would be unrealistic to ascribe them a population of more than 1,500–2,500. Intensive research in central Lycia has shown that around 400, *Phellos* was an important central place which controlled a relatively large territory and a harbour and, in addition, played a role as a residence of a branch of the Xanthian dynasty. Unfortunately, in this case, too, we have no precise information about residential areas and the population, apart from remarkable tombs of an aristocratic elite. Classical *Zagaba*, the only large settlement that has preserved its undisturbed Lycian character, demonstrates what we should expect an important 'Burgsiedlung' to look like. Here we find an acropolis, an agora equipped with administrative buildings, sanctuaries and various other buildings which point to *Zagaba*'s role as a market centre. It also contained a residential area for about 1,000 inhabitants, with houses indicating clear social distinctions that are also reflected in tombs of different quality. *Zagaba* can be regarded as a town, but it lacks works of art and refined architecture, i.e. truly urban characteristics.

In Hellenistic times, *Kyaneai* and other polis-centres functioned as political and administrative central places and acquired a diversified architecture. Yet these settlements had no more than several hundred inhabitants; they were not population centres. It is also difficult to prove that these agglomerations functioned as central market for the surrounding districts. In this regard they had to compete with rural communities in their territories which exercised central-place functions for people living on neighbouring farms, as demonstrated by the presence of local agoras, stoas and other public buildings. It appears problematic to define the polis-centres in general as towns. At the same time, a shift of urbanisation towards the coast promoted harbours, which had formerly been dependent on 'Burgsiedlungen' in their hinterland, to the status of centres of poleis or *sympoliteiai*. Because of their economic importance, the harbour settlements *Patara*, *Antiphellos* and *Aperlai* thus also became political and administrative centres and obtained the urban trappings of public buildings. They might be classified as towns.

In Lycia as a whole, urbanistic development was astonishingly weak during the Hellenistic period. It was the integration of Lycia into the Roman provincial system in 43 CE which gave a real push to urbanisation, with a peak during the

second century. Large-scale, splendid buildings came into being, some of them financed by local and regional notables and others by Roman governors and emperors. Among the settlements of Roman-imperial Lycia *Patara*, *Tlos*, *Rhodiapolis* and *Limyra* stand out with their colonnaded streets and halls, luxurious baths, stadia, theatres, council halls and honorary monuments. The refinement of their architecture and works of art might justify us calling them cities were it not for their limited populations, which hardly exceeded a few thousand inhabitants. Small towns like *Kyaneai* and the northern Lycian centres of *Oinoanda*, *Balbura* and *Boubon* participated in this urbanistic development on a more modest scale. From an administrative point of view the harbour settlement of *Timiussa* was a *kome*, but as an economic central place it served the whole territory of *Kyaneai* and part of that of *Myra*. On this basis this settlement might be classified as 'town-like'. In addition there continued to exist rural communities with local central-place functions, and a growing number of hamlets and isolated farms. In the course of its long history the Lycian settlement system became increasingly complex without producing any really large cities.

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